ORDER NO. KMS0107583C1

F5

Service Manual

ADVANCED HYBRID SYSTEM

KX-TA1232

KX-TA123260

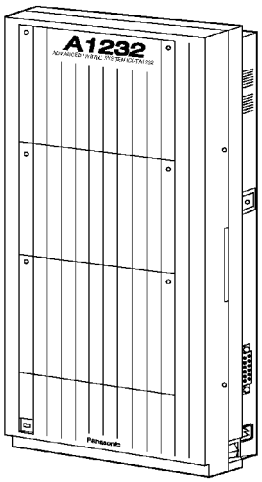
KX-TA123270

KX-TA123280

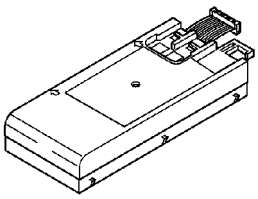
KX-TA123291

KX-TA123293

(for U.S.A.)



(KX-TA1232)



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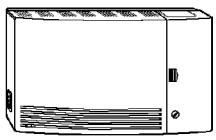

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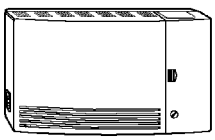

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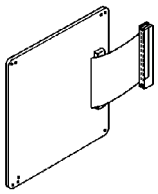
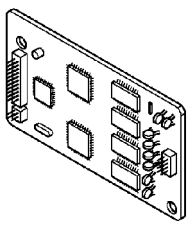


(KX-TA123291)



(KX-TA123293)

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. INTRODUCTION

1.1. CAUTION

When you mention the serial number, write down the 11 digits. The serial number may be found

on the label affixed to the back of the unit.

1.2. SAFETY PRECAUTIONS

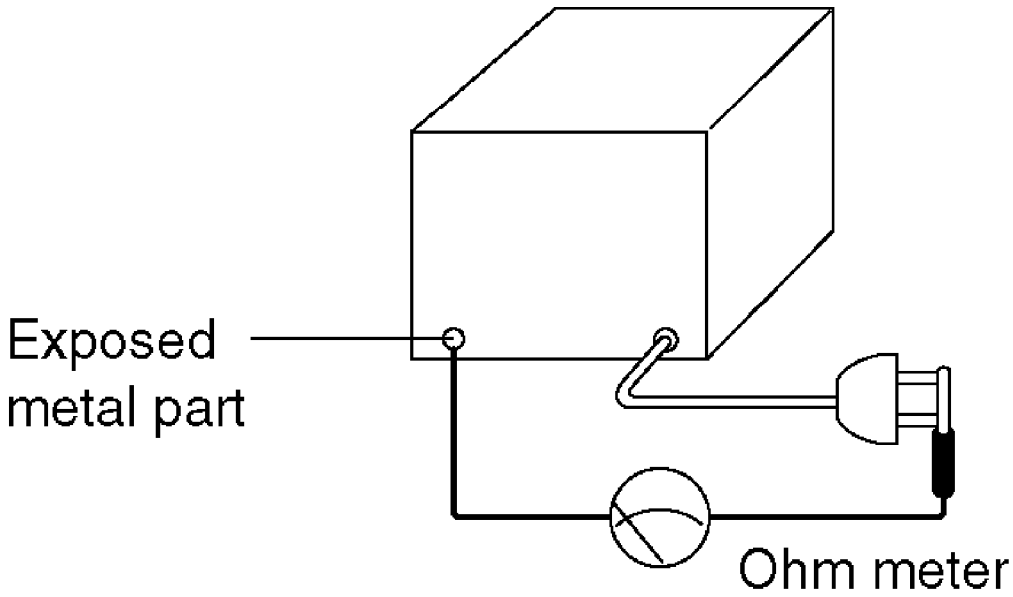
1. **Before servicing, unplug the power cord to prevent an electric shock.**
2. **When replacing parts, use only the manufacturer's recommended components of safety.**
3. **Check the condition of the power cord. Replace if wear or damage is evident.**
4. **After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.**
5. **Before returning the serviced equipment to the customer, be sure to perform the following insulation resistance test to prevent the customer from being exposed to shock hazard.**

1.3. INSULATION RESISTANCE TEST

1. **Unplug the power cord and short the two prongs of the plug with a jumper wire.**
2. **Turn on the power switch.**
3. **Measure the resistance value with an ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads, antenna, control shafts, handle brackets, etc.**

Note:
Some exposed parts may be isolated from the chassis by design. These will read infinity.

4. **If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.**



Resistance=more than 1MΩ (at DC500V)

1.4. FOR SERVICE TECHNICIANS

ICs and LSIs are vulnerable to static electricity.

When repairing, the following precautions will help prevent recurring malfunctions.

1. Cover plastic parts boxes with aluminum foil.

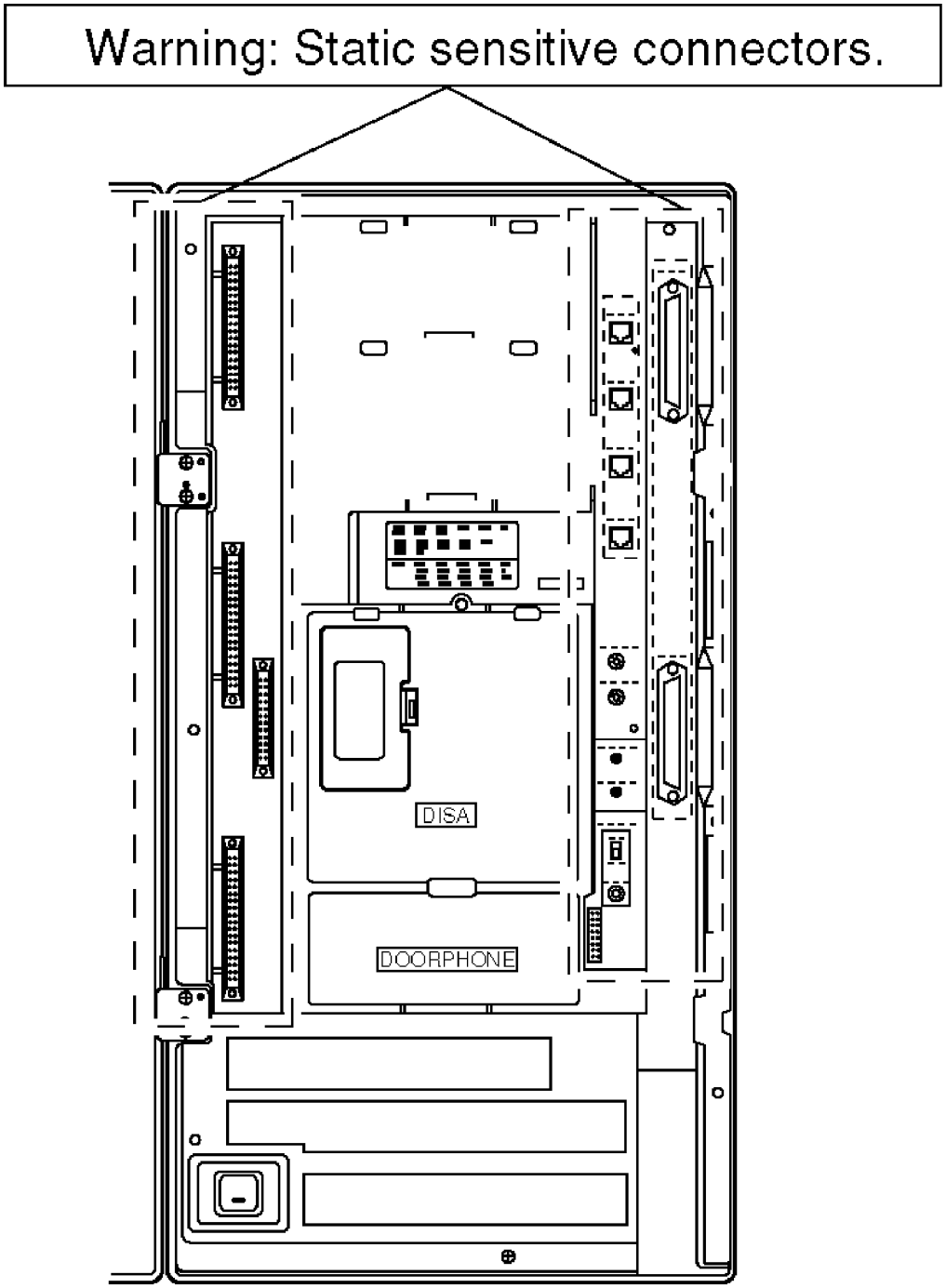
2. Ground the soldering irons.

3. Use a conductive mat on worktable.

4. Do not touch IC or LSI pins with bare fingers.

1.5. WARNING

Static sensitive devices used. To protect printed circuit boards from static electricity, do not touch connectors indicated below without first discharging body static by touching a ground terminal or wearing a properly installed grounding strap.



1.6. BATTERY CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to following caution: Disposal of lithium batteries should be performed by permitted, professional disposal firms knowledgeable in state government federal and local hazardous materials and hazardous waste transportation and disposal requirements. Battery continues to have no transportation limitations as long as they are separated to prevent short circuits and packed in strong packaging.
Commercial firms that dispose of any quantity of lithium cells should have a mechanism in place

to account for their ultimate disposition. This is a good practice for all types of commercial or industrial waste.
Recommend Type Number: CR2354(BATT)

1.7. NOTE

For details of installation, refer to the Installation Manual.

2. SPECIFICATIONS

2.1. GENERAL DESCRIPTION

1. Capacity	**CO lines** **Stations**	**12 max.** **32 max.**
2. Control Method	**Stored Program CPU: 16 bits CPU**	
3. Switching	**Non Blocking PCM Time Sharing Switch**	
4. Power Supplies	**Primary** **Secondary**	**120 V AC, 60 Hz** **Station Supply Volt: 30 V, Circ** **5 V, 15 V**
	Power Failure **- 3 CO lines max. assigned to stations (Power Failure Transfer)**	
5. Dialling	**Outward** **Internal** **Mode Conversion**	**Dial Pulse 10PPS, 20PPS** **Tone (DTMF) Dialling** **Dial Pulse (DP) 10PPS, 20PPS** **Tone (DTMF) Dialling** **DP-DTMF, DTMF-DP**
6. Intercom paths	**4**	
7. Connector	**CO lines** **Station** **Paging Output** **External Music Input**	**Modular Jack** **Amphenol Connector** **Pin Jack (RCA JACK)** **Two-conductors Jack (MINI JA** **/9/64 inch diameter)**
8. EXT Connection	**Cable**	**1 pair wire (T,R) (Standard Tel** **2 pair wire (T,R,D1,D2) (KX-T7** **T7130, KX-T7020, KX-T7030, K** **KX-T7055)** **1 pair wire (D1,D2) (KX-T7040)**
9. SMDR	**Interface** **Output Equipment** **Detail Recording**	**EIA (RS-232C)** **Printer** **Date, Time, Ext. Number, CO L** **Number, Dialed Number, Call I** **Account Code**
10. Dimensions	**325(W)×640(H)×115(D) mm (12 13/16"×25 3/16"×4 1/2" inches)**	

11. Weight	**7.8 kg (17.2 lb)**

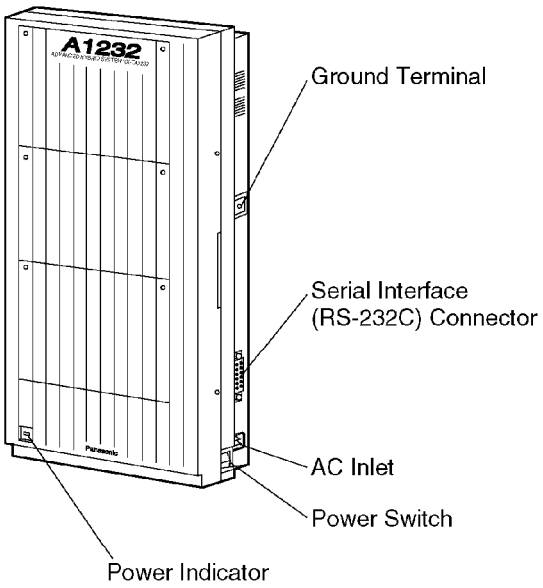
2.2. CHARACTERISTICS

1. Station Loop Limit	**KX-T7135, KX-T7130, KX-T7020, KX-T7030, KX-T7050, KX-T7055** **Single Line Telephone** **Doorphone**	**40 ohms** **600 ohms including set** **20 ohms**
2. Minimum Leak Resistance	**15,000 ohms**	
3. Maximum Number of Station Instruments per Line	**1 (KX-T7135, KX-T7130, KX-T7020, KX-T7030, KX-T7050, KX-T7055 or s telephone)** **2 (Parallel connector of a proprietary telephone and a standard telepho**	
4. Ring Voltage	**70 Vrms at 25 Hz depends on Ringing Load**	
5. Primary Power	**120 V AC, 60 Hz**	
6. Central Office Loop Limit	**1600 ohms maximum**	
7. Environmental Requirements	**0-40°C, 32-104°F, 10%-90%**	
8. Hookswich Flash Timing Range	**204-1000 milliseconds**	

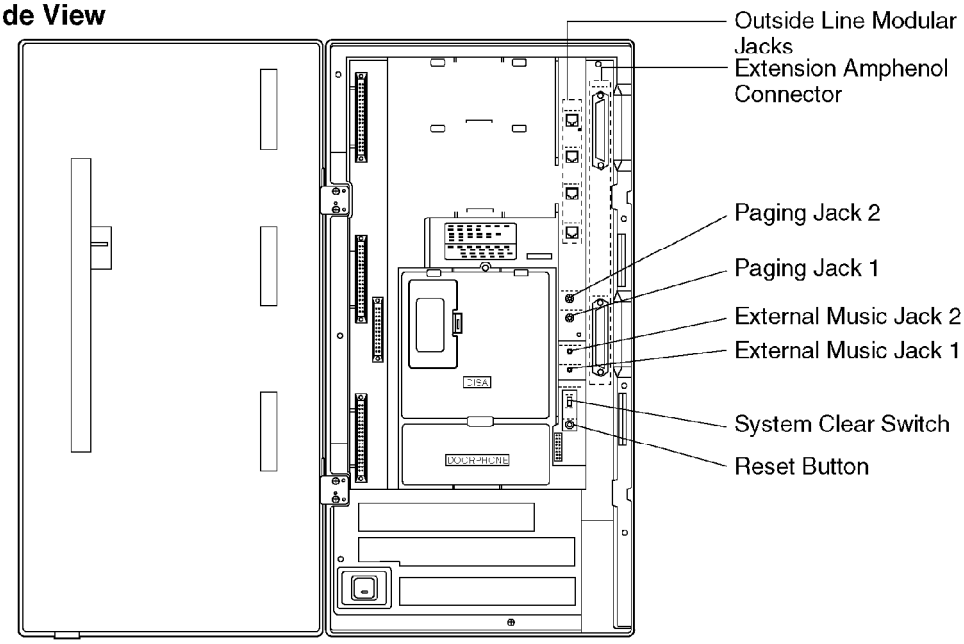
Design and specifications are subject to change without notice.

3. NAME AND LOCATION

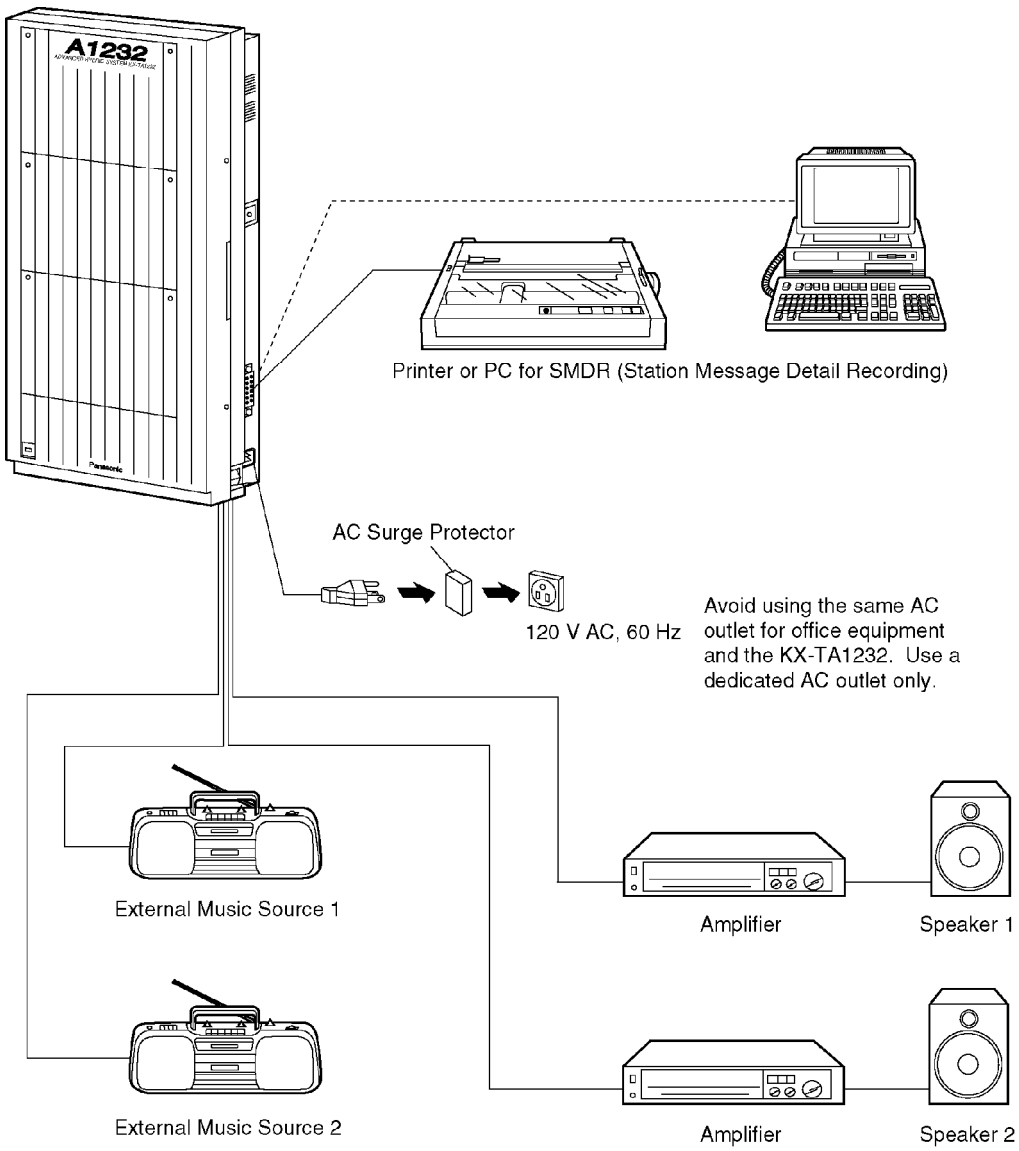
OverView

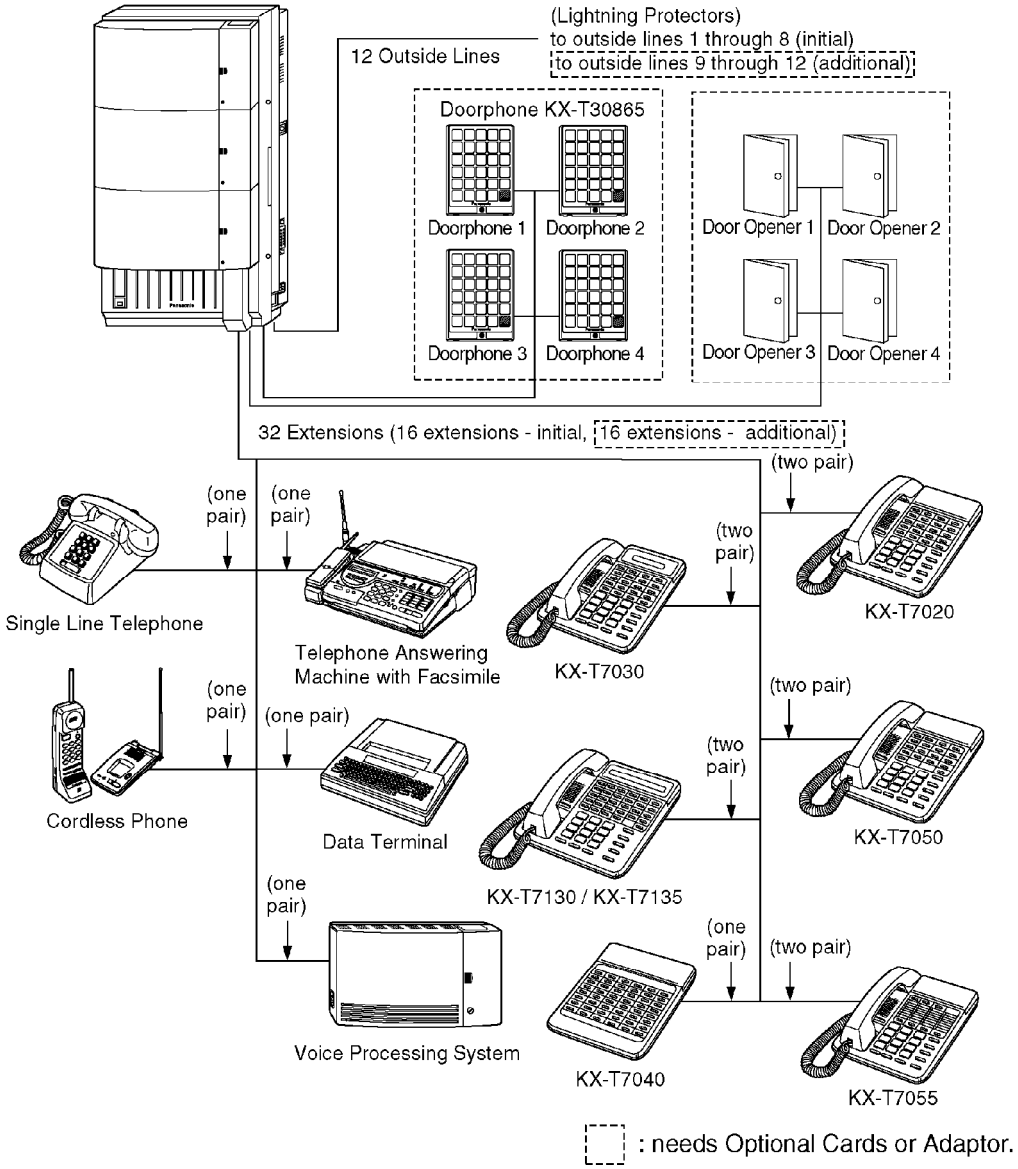


Inside View



4. CONNECTION


A1232
Printer or PC for SMDR (Station Message Detail Recording)
AC Surge Protector
120 V AC, 60 Hz
Avoid using the same AC outlet for office equipment and the KX-TA1232. Use a dedicated AC outlet only.
External Music Source 1
Amplifier
Speaker 1
External Music Source 2
Amplifier
Speaker 2



5. DISASSEMBLY INSTRUCTIONS (KX-TA1232)

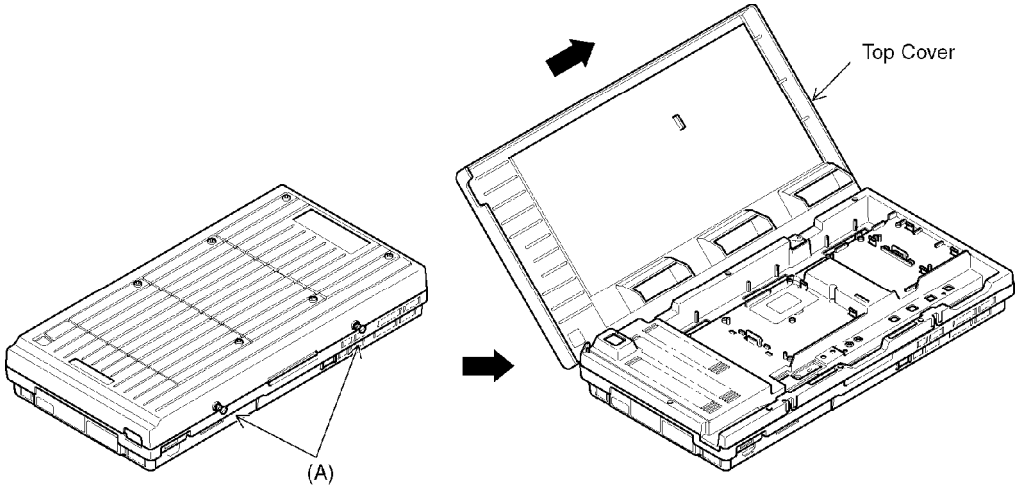
5.1. HOW TO REMOVE THE TOP COVER

Procedure 5.1.

1. Loosen the two Screws (A).

2. Open the Top Cover.

3. Slide the Top Cover in the direction of the arrow when removing it.

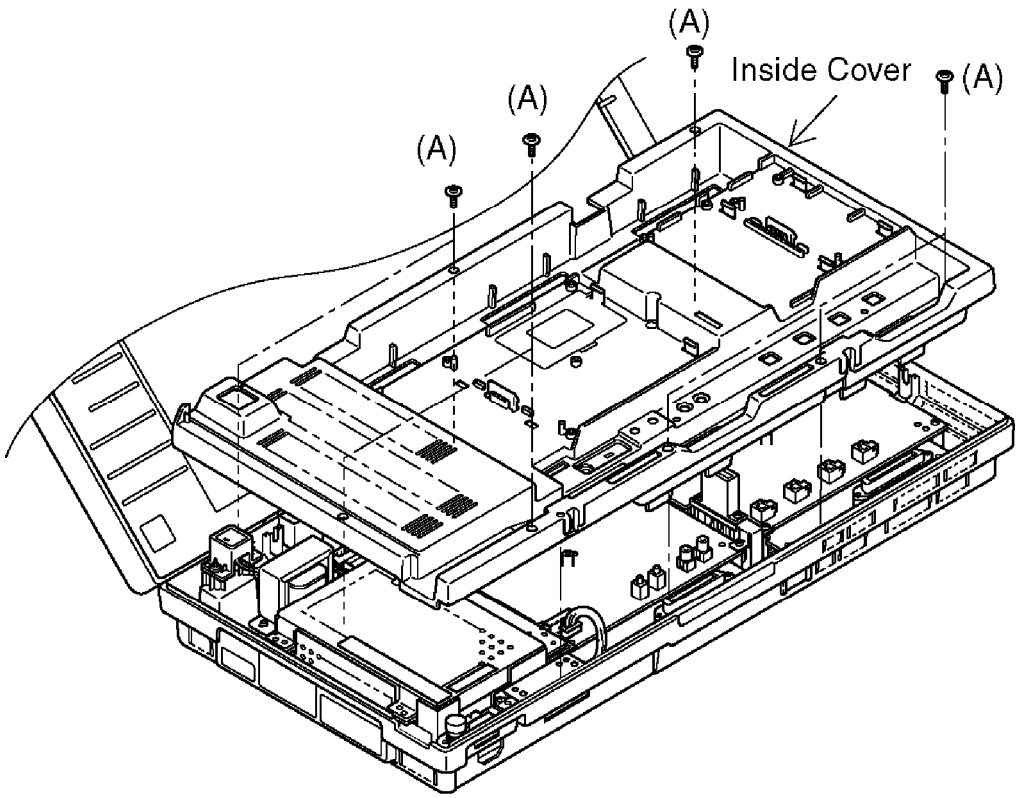


5.2. HOW TO REMOVE THE INSIDE COVER

Procedure 5.1. → 5.2.

1. Remove the eight Screws (A).

2. Remove the Inside Cover.



5.3. HOW TO REMOVE THE CPU AND CO BOARDS

Procedure 5.1. → 5.2. → 5.3.

(CPU Board)

1. Remove the five Screws (A).

2. Remove the three Connectors.

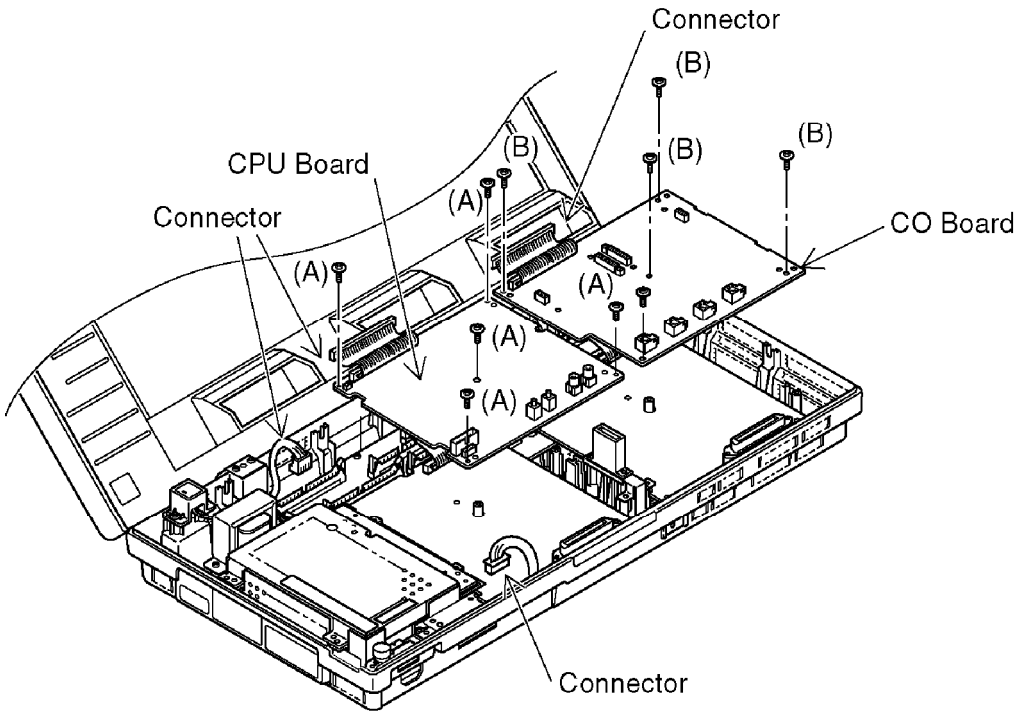
3. Remove the CPU Board.

(CO Board)

1. Remove the five Screws (B).

2. Remove the one Connectors.

3. Remove the CO Board.



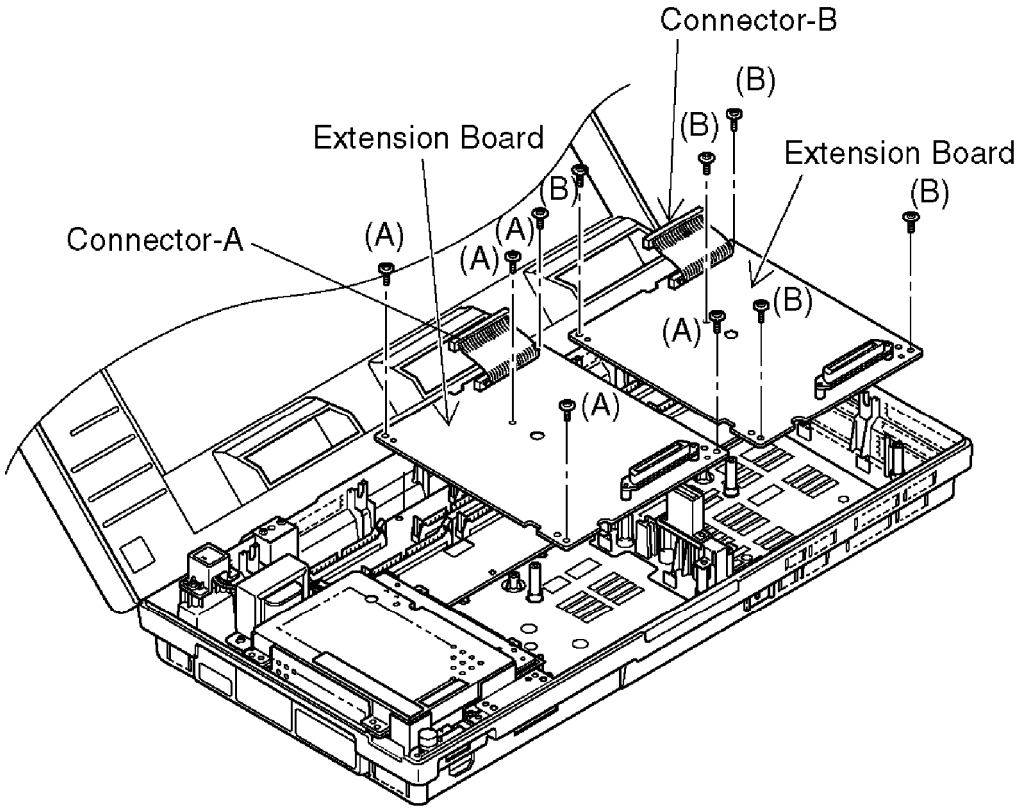
5.4. HOW TO REMOVE THE EXTENSION BOARD

Procedure 5.1. → 5.2. → 5.3. → 5.4.

1. Remove the Screws (A) or (B).

2. Remove the one Connector (A) or (B).

3. Remove the Extension Board.



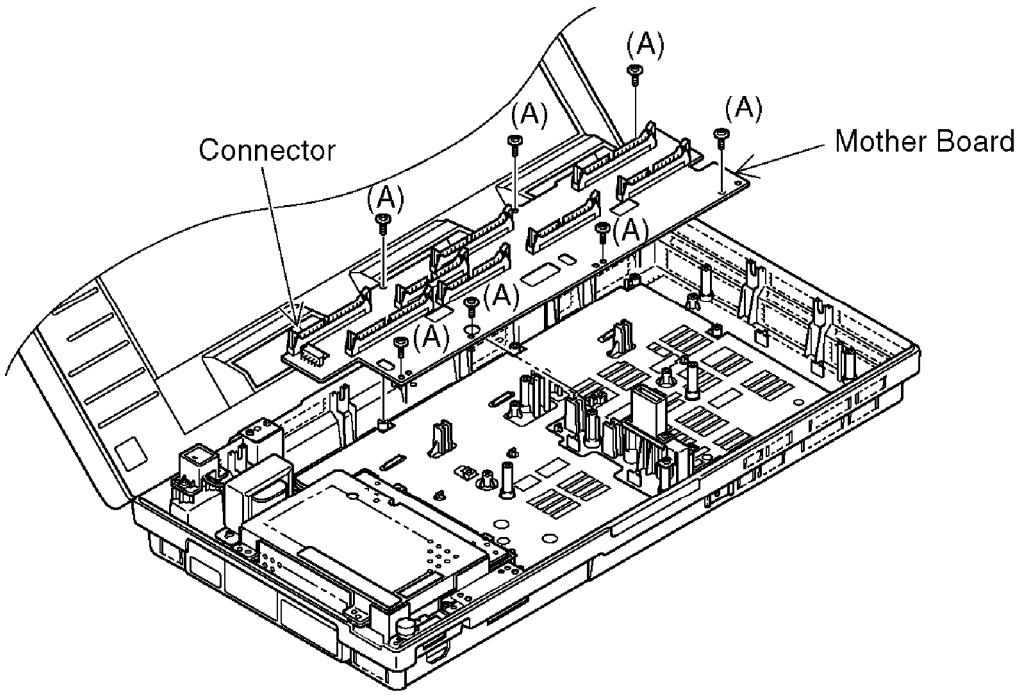
5.5. HOW TO REMOVE THE MOTHER BOARD

Procedure 5.1. → 5.2. → 5.3. → 5.4. → 5.5.

1. Remove the seven Screws (A).

2. Remove the one Connector.

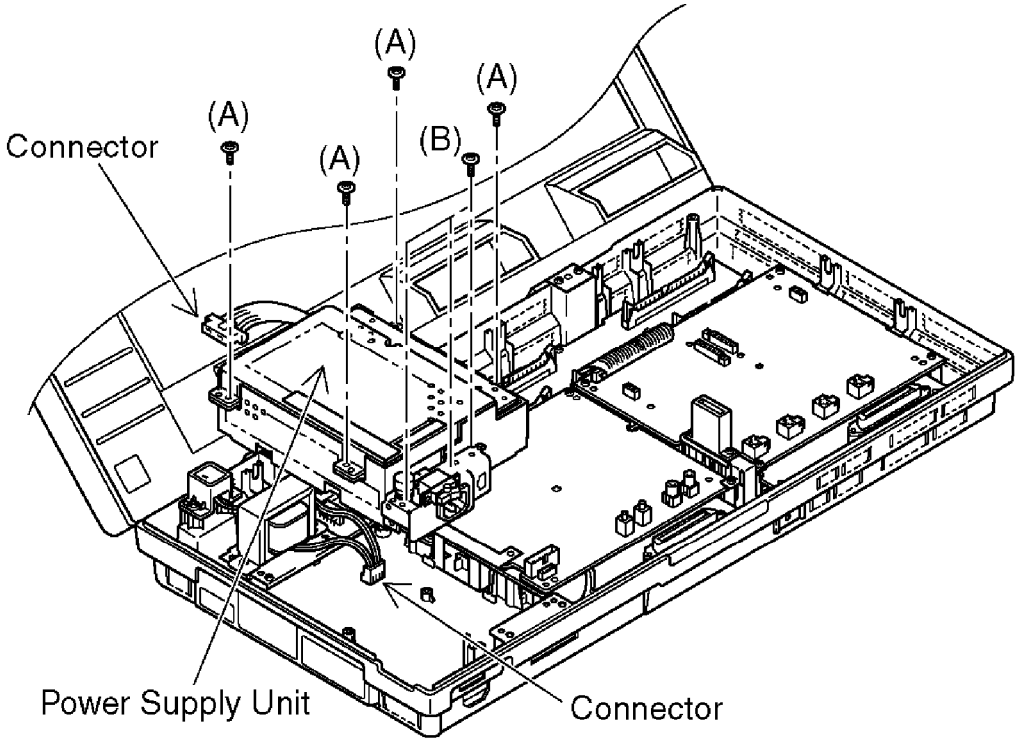
3. Remove the Mother Board.



5.6. HOW TO REMOVE THE POWER SUPPLY UNIT

Procedure 5.1. → 5.2. → 5.6.

1. **Remove the four Screws (A).**
2. **Remove the three Screws (B).**
3. **Remove the two Connector.**
4. **Remove the Power Supply Unit.**



5.7. HOW TO REMOVE THE POWER SUPPLY BOARD

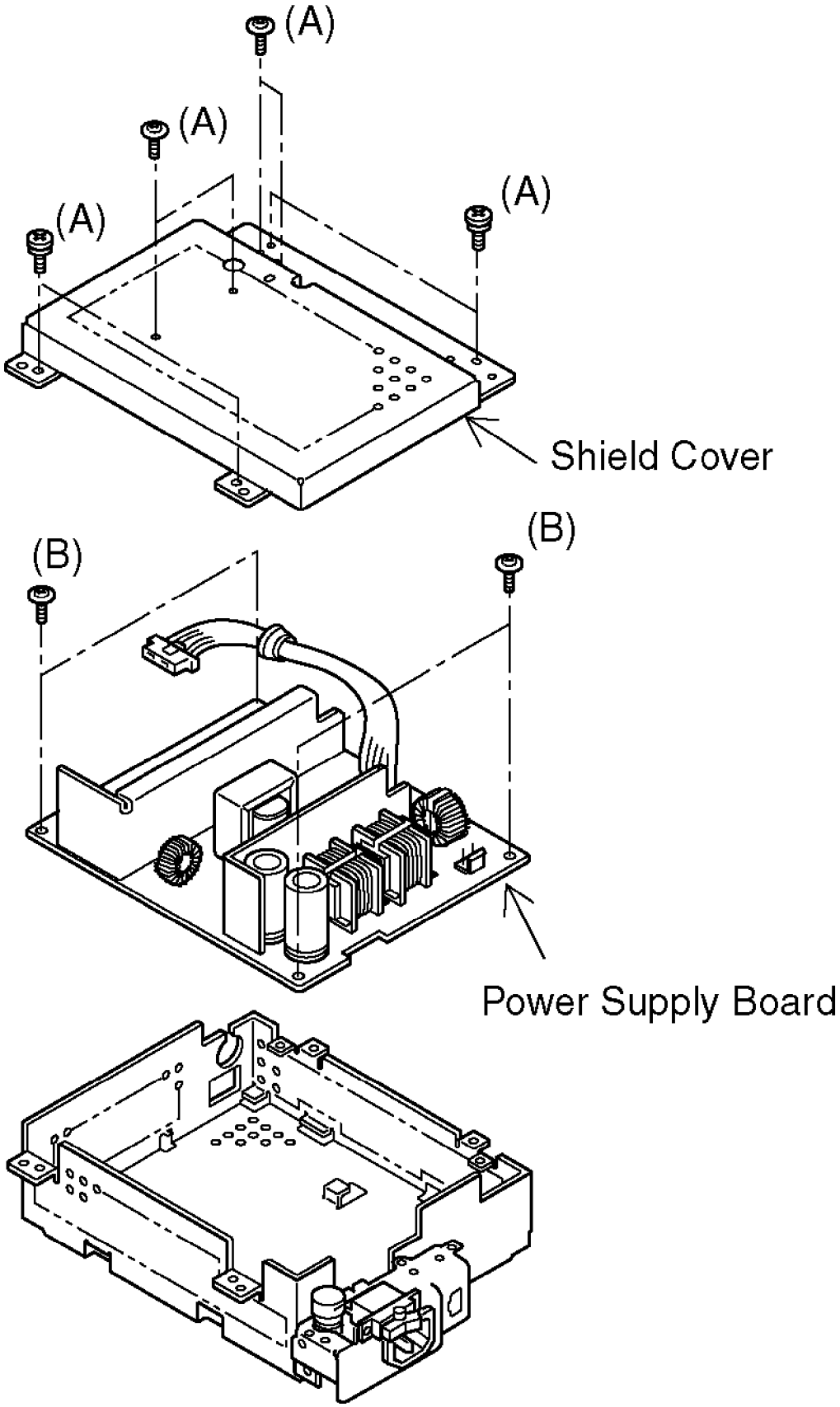
Procedure 5.1. → 5.2. → 5.6. → 5.7.

1. Remove the seven Screws (A).

2. Remove the Shild Cover.

3. Remove the four Screws (B).

4. Remove the Power Supply Board.


(A)
(A)
(A)
(A)
Shield Cover
(B)
(B)
Power Supply Board

6. GENERAL DESCRIPTION

6.1. OUTLINE

This equipment is a telephone exchange on the premise constructed with basic (KX-TA1232). Basic contains controlling section and time-sharing switch section.
The features of this system are as follows:

(1) Advanced hybrid system
By one type of a board, this system covers the single line telephones (SLT), the analog type of the proprietary telephone (APT) at the extension (EXT) ports.

(2) Parallel station
A SLT and a APT can be connected in parallel at each extension port. They can be used in parallel as a mother daughter phone.

6.2. OUTLINE OF SPECIFICATIONS

ITEMS	SPECIFICATIONS
Control system	Stored program system
Call system	Non blocking PCM TSS system
Exchange system	T1 (Time switch only)
Redundancy structure	Non multiplex, simplex
Modulation system	μ Law/A Law (both), PCM 8 bits 8 kHz sampling
CPU	CPU 68301 (12 MHz) No sub-processor on CO/EXT CARDs
Max. number of CO lines	12 lines (8 lines as standard)
Max. number of EXT lines	32 lines (16 lines as standard)
Max. number of connectable DSS console	4 units connect at EXT ports
Max. number of connectable Door-phone	4 units use optional card
DISA simultaneous functional line	2 lines use optional card
Conference lines	3 persons × 6 conferences
External paging ports	2 ports
External holding sound sources ports	2 ports
Internal holding sound sources	1, not available for USA and Canada
RS-232C ports	1 port, asynchronous 300~9600 bps (full duplex)
Door-opener control outputs	4 channels, attached with a Door-phone card, optional
DTMF generator	2 channels (System employs common resources)

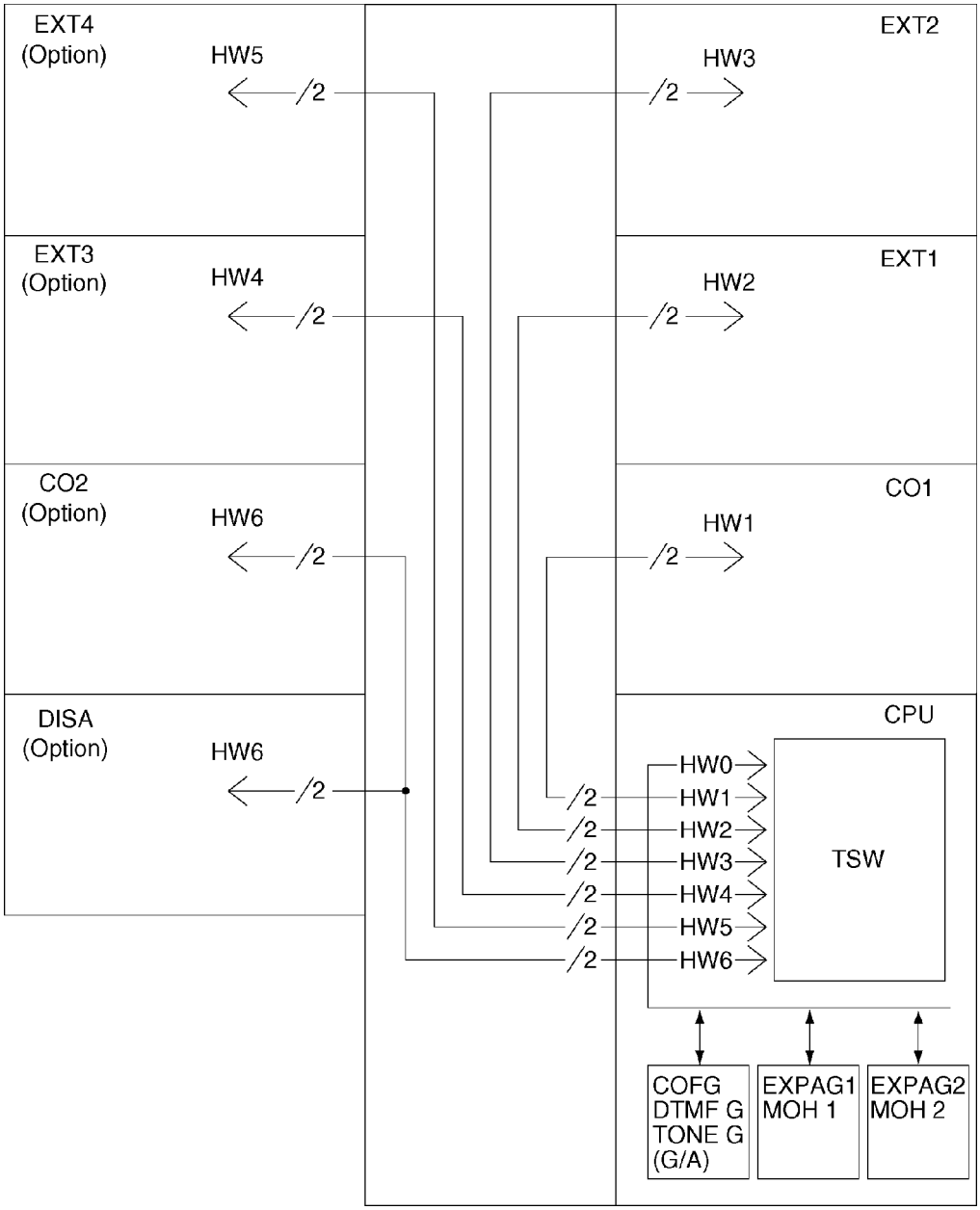
ITEMS		SPECIFICATIONS	
Back-up line (Transfer lines when power fails)		2 line for a basic system, 4 lines for a expansion systen	
Type of terminal, wiring system and line impedance		SLT:	2 (T, R) 600 Ω or less (inc. TEL impeda
		APT:	4 (T, R, H, L) 40 Ω or less
		A.DSS console:	2 (H, L) 40 Ω or less
Optional	4-CO line card (EXPANSION CO CARD):		1 unit/system
	8-EXT line card (EXPANSION EXT CARD):		2 unit/system
	Door-phone card (DOOR-PHONE CARD):	4 terminals 4 door-opener control	1 unit/system
	DISA card (DISA CARD):	2 channels Message memory 32 sec.×2	1 unit/system
	Caller ID card (CALLER ID CARD):	4 channels	3 units/system
	BASIC CO CARD can be installed with 2 units. EXPANSION CO CARD can be installed another 1 unit.		

6.3. ARTICLES

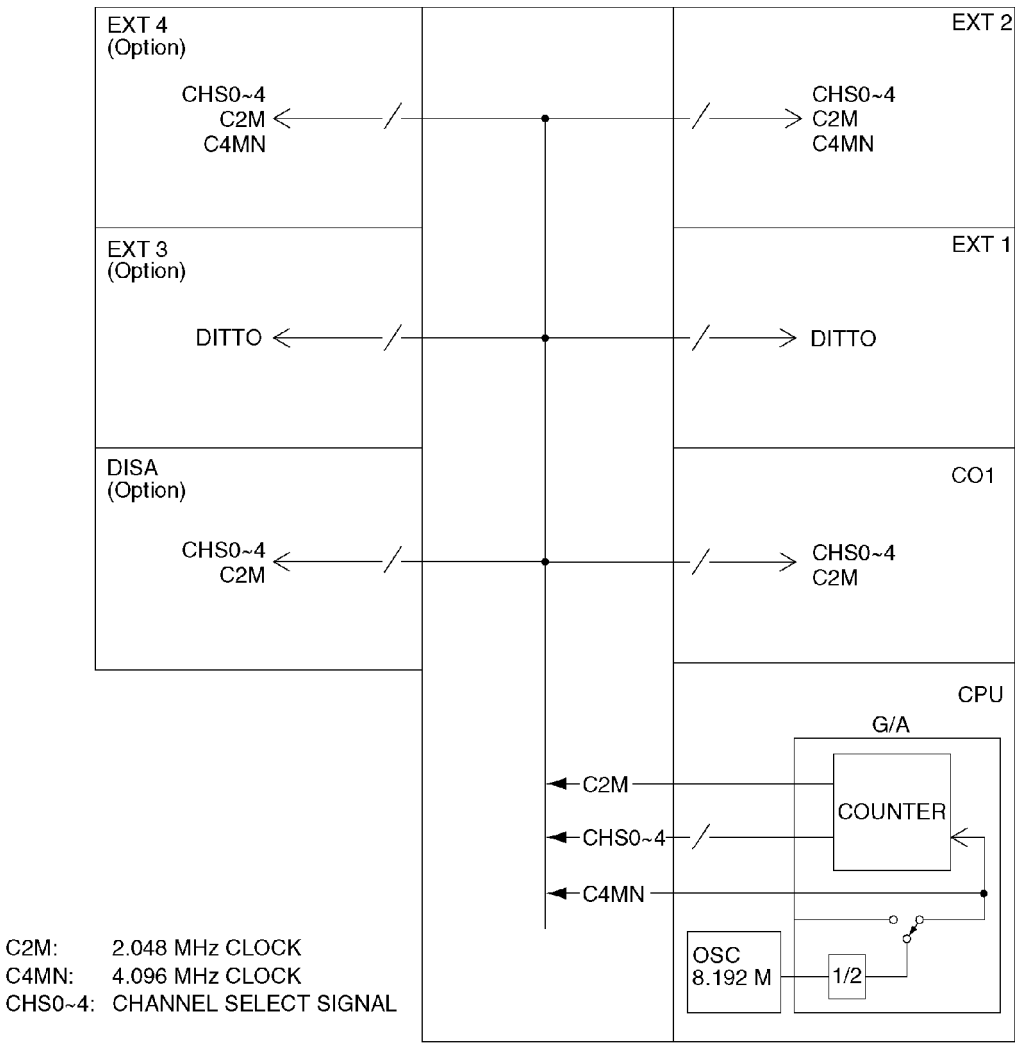
Unit structure and function are outlined in this section.

CLASS	UNIT NAME	PRODUCT NO.	QTY	OTHERS
BASIC	POWER SUPPLY BOARD	KX-TA1232	1	
	MOTHER BOARD	KX-TA1232	1	
	CPU BOARD	KX-TA1232	1	CPU, TSW, CONF
	CO BOARD (BASIC)	KX-TA1232	1	8 CO LINES/BOARD
	EXT BOARD (BASIC)	KX-TA1232	2	8 EXT LINES/BOARD
	LED BOARD	KX-TA1232	1	
	SMDR BOARD	KX-TA1232	1	
OPTION	DOOR-PHONE UNIT	KX-TA123260	1	
	EXPANSION EXT UNIT	KX-TA123270	2 Max.	8 EXT LINES/BOARD
	EXPANSION CO UNIT	KX-TA123280	1	4 CO LINES/BOARD
	DISA CARD	KX-TA123291	1	
	CALLER ID CARD	KX-TA123293	3 Max.	ONLY FOR U.S.A/CAN MARKET

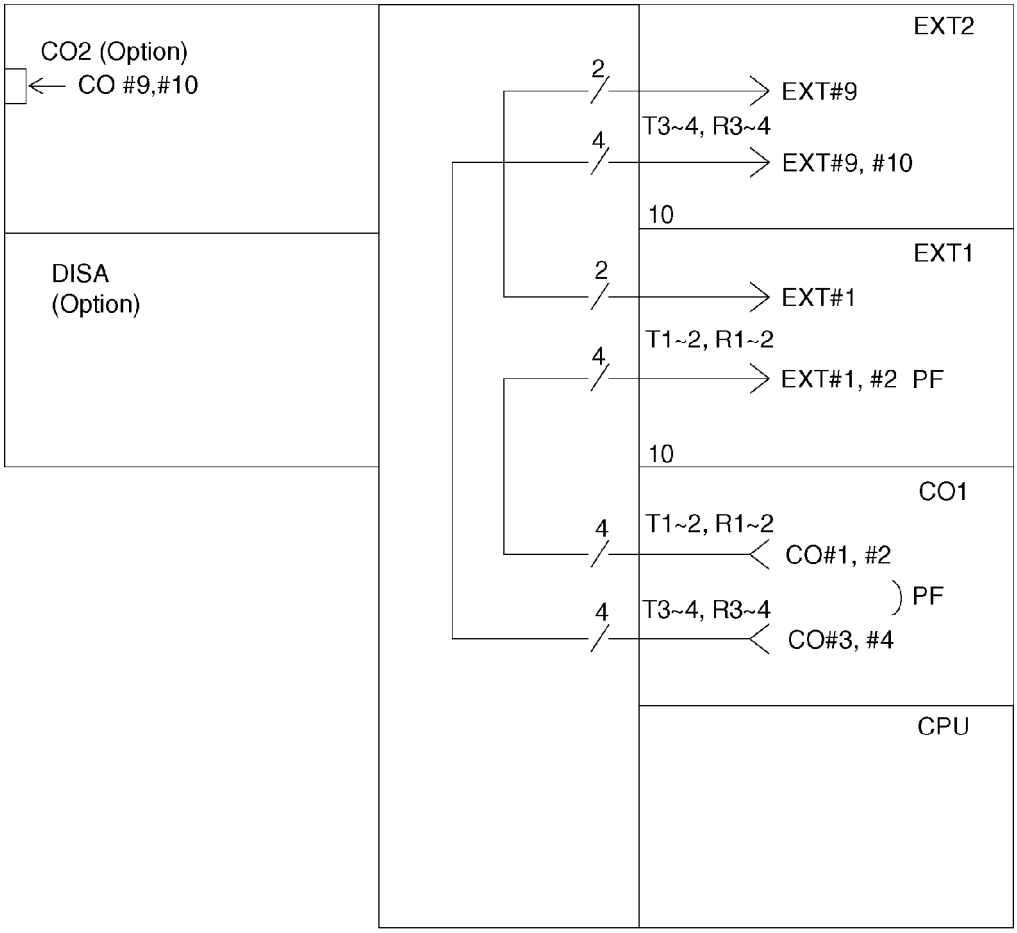
(1) SYSTEM DIAGRAM OF PCM HIGHWAY



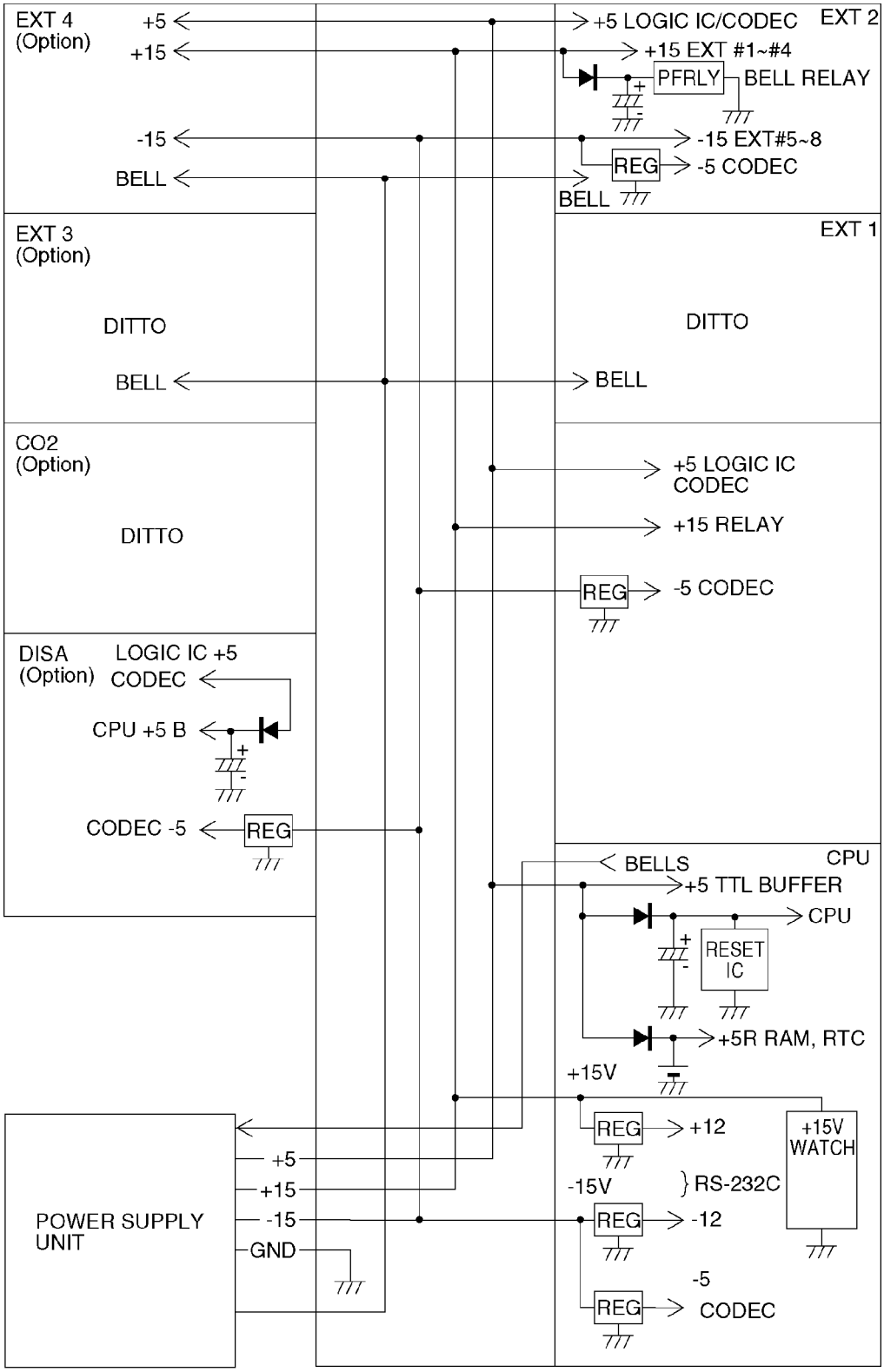
(2) SYSTEM DIAGRAM OF PCM-CLOCK



(3) SYSTEM DIAGRAM OF ANALOG LINE



(4) SYSTEM DIAGRAM OF POWER SUPPLY



6.4. CONTENTS

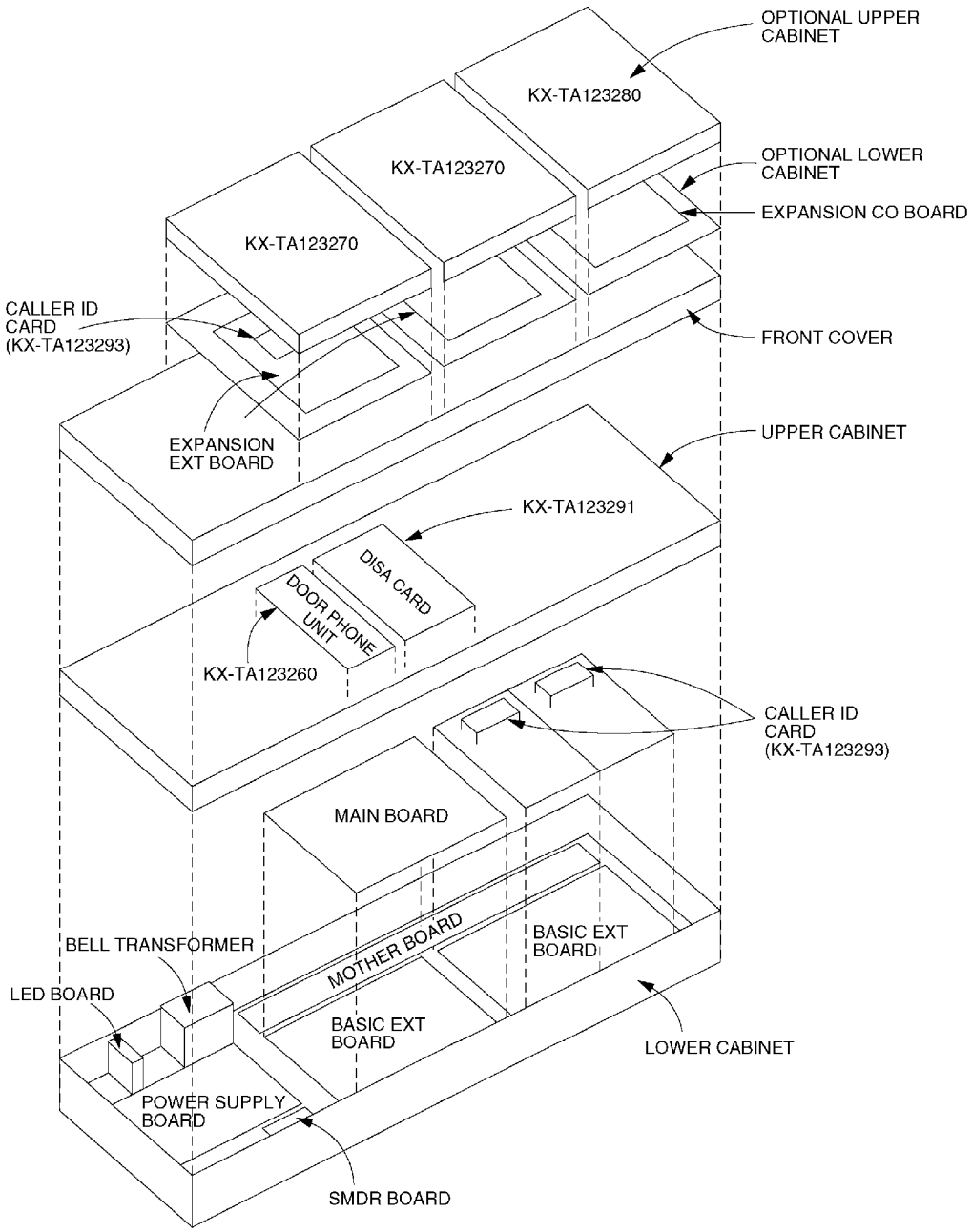
This equipment has mainly 3 types of cabinets and 2 types of optional cabinets.
Each cabinet relates with each board about installation as follows.

BASIC CABINET

FRONT COVER		
UPPER CABINET	**DISA CARD**	**(Option)**
	DOOR-PHONE UNIT	**(Option)**
LOWER CABINET	**MAIN BOARD**	**(Basic)**
	BASIC CO BOARD	**(Basic)**
	BASIC EXT BOARD	**(Basic)**
	POWER SUPPLY BOARD	**(Basic)**
	MOTHER BOARD	**(Basic)**
	LED BOARD	**(Basic)**
	SMDR BOARD	**(Basic)**
	CALLER ID CARD	**(Option)**

OPTIONAL CABINET

OPTIONAL UPPER CABINET		
OPTIONAL LOWER CABINET	**EXPANSION CO CARD**	**(Option)**
	EXPANSION EXT CARD	**(Option)**
	CALLER ID CARD	**(Option)**



7. FUNCTION OF EACH CARD

7.1. BASIC

(1) POWER SUPPLY UNIT

Power supply board generates three DC voltage of +15, -15 and +5.3 V from the AC power source, and supplies them to the system.

Function	Description
Generating DC voltage	Generates +15, -15 and +5.3 V from AC power or the batteries. Capacities: - +5.3 V, 3.0 A - +15 V, 4.7 A - -15 V, 4.5 A
Bell Amp	It increases the bell signal from CPU CARD, and sends to the EXT CARD

(2) CPU BOARD

CPU BOARD covers the CPU function which controls the system and TSW (time sw.) function which exchanges the PCM lines as the main functions. In addition, it is equipped with the common resources such as the conference function, the clock function, and the clock generator function.

Function	Description
CPU function	Controls the general system according to the programs.
TSW function	Exchanges the PCM lines following the control from CPU.
Conference function	Allows the conference call of 3-person × 6-conference.
Clock function	The clock LSI backed up by batteries realizes the clock function in the system.
Tone generator	Generates 4 types of the call progress tone and 2 channels of the DTMF tones.
Holding tone source	Internal holding tone source (optical for the derivative models). External holding tone source: 2 channels.
External paging function	Output function for 2 channels of the external pagings.
Serial I/F function	RS-232C port: 1 port
Clock generator function	Generates the clock for PCM highway system and supplies it to the syst
Voltage watching	Watches the voltages of +5 V and +15 V, resets the system if +5 V is der
Back-up function	Back up the CPU peripherals (+5.3 V) for 1 second or more during the po failure. Back up the system data in RAM and the clock IC for 7 years by the lithiu battery.
Bell signal generator function	25 Hz signals are generated by the CPU and filter circuit.

(3) BASIC CO BOARD

BASIC CO BOARD functions the interface between the system and the lines. 8 lines per one CO board are covered.

Function	Description
Ring detection function	Detecting the bell signals from the stations.
Catch of CO lines function	Catching the CO lines by making the DC current loop.
End of call function	CPU detection
Dial pulse transmission function	Out-put the dial pulse to the lines by switching the DC loop on and off.
2-4 wires convert	2 w. signals from the stations are converted in 4 w.
A/D, D/A convert	Converting between 4 w. analog signals and PCM digital signals.
Transfer during power failure	Having 4 direct paths to the extensions for transferring when the power fails.

(4) BASIC EXT BOARD

BASIC EXT BOARDS are installed into the system as standards, and play a roll of the interface between the system and the terminals.The terminals which are connectable with board are SLT and APT. 8 lines per one card are covered and they allow a parallel connection of SLT and APT (mother and daughter operation).

Terminal	Function	Description
SLT	Power supply	Supplying the power to SLT for calling.
	Hook detection	Detection of On-hook and Off-hook when t bell signal is not presented.
	Ring trip detection	Detection of Off-hook when the bell signal presented.
	Dial pulse detection	Detection of pulse dial
	DTMF tone detection	Detection of DTMF tone
	Switching in power failure	Connecting directly between the CO line a the terminal when power fails. 1 line
SLT APT	2-4 w. convert	Converting 2 w. from the terminals into 4 v
	A/D, D/A convert	Converting between 4 w.-analog signals a PCM digital signals by CODEC
APT	Data transmission	Communication with the APT about the control data such as the key information, t ramp information.

(5) MOTHER BOARD

Each board of CPU, CO BOARD, EXT BOARD etc. is powered through the MOTER BOARD, and also transmits the signals through it.

(6) LED BOARD

LED BOARD is for installing LED which shows the operating status.

(7) SMDR BOARD
SMDR BOARD leads signal of RS-232C out with DIN 25 pin connector.

7.2. RESOURCE OF OPTION

(1) EXPANSION CO UNIT (KX-TA123280)
EXPANSION CO UNIT is an optical unit for extending the CO lines from 8 up to 12 lines. the differences between this unit and the basic one are follows;

- The number of lines are 4. (8 for basic one)
- 1 line for the transfer function when the power fails

(2) EXPANSION EXT UNIT 8KX-TA123270)
EXPANSION EXT UNIT is an optical unit for extending the EXT lines from 16 up to 24 or 32 lines.The differences between this unit and the basic one are as follow;

- No diagnostic function for the CO board

(3) DOOR-PHONE UNIT (KX-TA123260)
DOOR-PHONE UNIT is an optical unit for connecting the door-phone and the door-opener with the system. The system can be installed with one card, and one of this unit can cover 4 units of the door-phone and 4 units of the door-opener.

Function	Description
Current supply	Supplying the current to the door-phone.
2-4 w. convert	Converting 2 w. signals from the door phone into 4 w.
A/D, D/A convert	Converting between the 4 w. analog signals and the PCM digital signals CODEC
Detect connection of Door phone	Detect if this board is connected with the door-phone.
Door-opener control	4 channels of the relay contact out-put for the door-opener control.

(4) DISA CARD (KX-TA123291)
DISA CARD is an optical card that automatically. responds to the incoming signals on the CO lines without through operator, and by receiving the secondary dial (DTMF signals) that calls the specific extension and between the CO lines. The number of channels is 2.

Function	Description
Sending OGM	Sending OGM (Out Going Message) stored in RAM to the CO line. 2 type OGM for 32 sec. each are stored.
DTMF signal detection	After sending OGM to CO line, detecting the in-coming signal of DTMF.
Call between CO lines	Two call paths for call between CO lines.
DTMF repeat	When calling between the CO lines, resending the received DTMF to maintain the certain level of the DTMF signals.
End of call detection	When calling between the CO lines, detecting the no tone, the cyclic ton and the continuous tone. 2 channels/1 path, total 4 channels
OGM record	Recording the OGM from the specific extension into RAM. Controlling th level by AGC circuit. Only one channel is available as the recording channel.
FIFO communication	Communicating between CPU on this card and main CPU through FIFO memory.

(5) CALLER ID CARD (KX-TA123293)
CALLER ID CARD is an optical card corresponding to "caller ID service" available in the north American market. This board is added on the CO board and detects the 300 bps modem signals transmitted during recesses between the bell signals form the station, and convents them into the parallel data.
One card is corresponded to the 4 lines. Two cards can be installed on the BASIC CO BOARD (8 lines) and one board can be installed on the EXPANSION EXT BOARD (4 lines).

8. EXPLANATION OF CIRCUIT OPERATION

8.1. BASIC

(1) POWER SUPPLY UNIT
POWER SUPPLY UNIT consists of the following.
Line Filter Section
Rectifier and Smoothing Section
Switching Section
Control Section
+15 V Circuit
-15 V Circuit
+5.3 V Circuit
Bell Amp Circuit

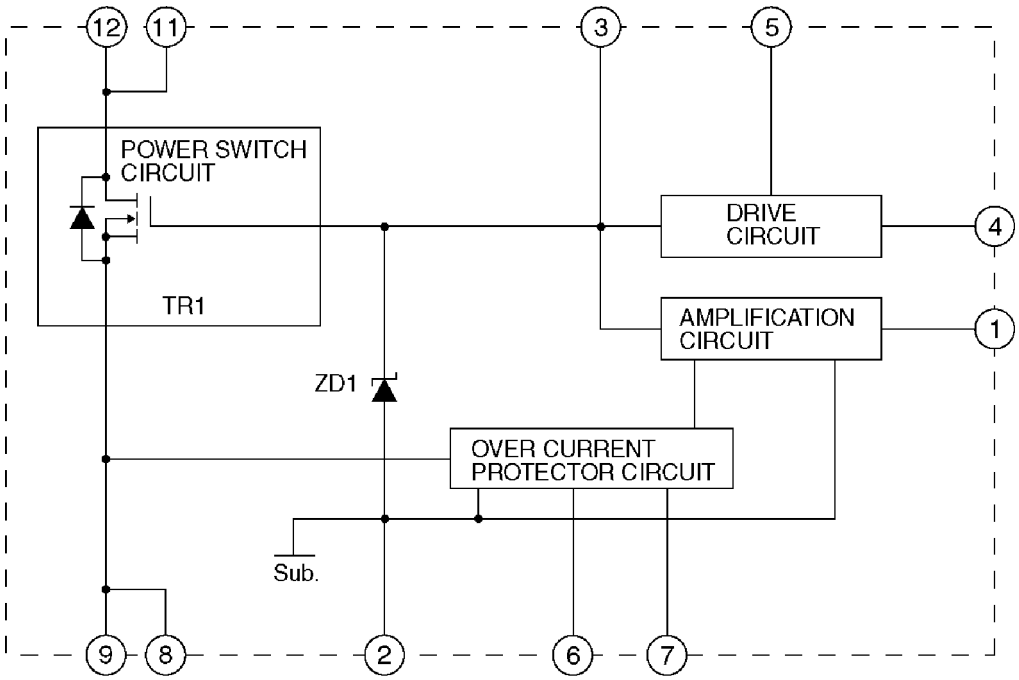
Line Filter Section
Common mode noise is removed by C401, C402 and C405 to C406, and normal mode noise by L400 and L401. Lightening surges are absorbed by CR400, CR401 and SA400.

Rectifier and Smoothing Section
The input signal is full-wave rectified by bridge diode D400, and smoothed by C408, C409, resulting in a DC current. TH401 and TH402 are power thermistors.

Switching Section
The switching section is a basic RCC type which uses the IC400 included power MOS.FET. D401, R403 and C412 are for resetting the excitation energy stored in T400 while T400 is OFF. C410 and R408 are used as a snuffer for FET in IC400.

Control Section
IC400 is a RCC type switching regulator adopted power MOS.FET. The external circuit of IC400 has the following roles.
R401, R402, C111: For starting
R400: For detecting an electric current
C417: For adjusting over current detector level
R404, C414: For compensating phase
R407, C415: For compensating over current protector circuit parts temperature dependence
PC400: For feed back

BLOCK DIAGRAM



+15 V Circuit
There are 2 output of switching transformer, T400 and +15 V is generated from the circuit connected to pin 12, 13-11. +15 V cannot be stabilized by oscillation control of the primary side

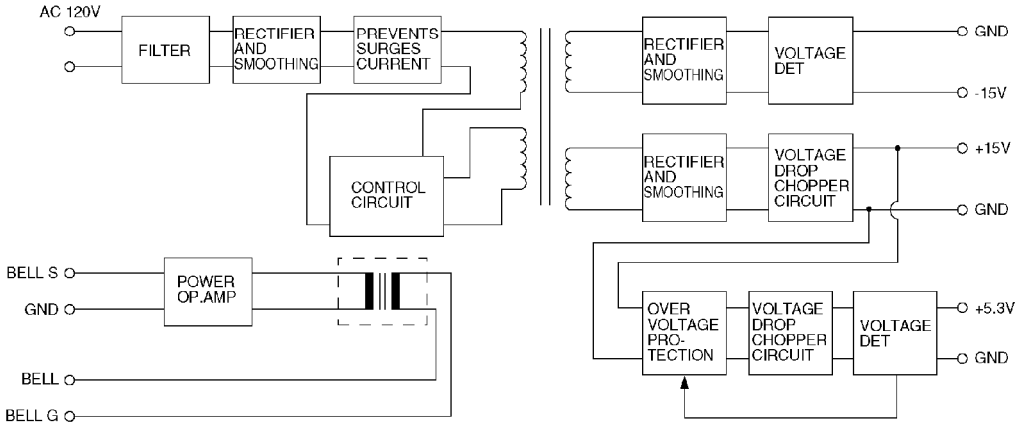
since feed back is not done on the primary side from +15 V line. So, the chopper regulator, IC450 and the circuit around it stabilize +15 V. The following is the roles of main surrounding circuit.
D452, C454, C455: Rectifier and smoothing circuit
L450: For preventing resonance
R456, C459: For compensating phase
R457: For detecting an electric current
L451, C460: Filter
L454, C467: Filter

-15 V Circuit
The circuit connected pin 8, 9-10 of switch transformer T400 generates -15 V. With feed back on the primary side from -15 V line, -15 V is stabilized by the oscillation control of the primary side. The following is the roles of main surrounding circuit.
D451, C450: Rectifier and smoothing circuit
D450, Q450, C452: Feed back circuit
PC400, R451, R454,
VR450, R453,
L453, C468: Filter

+5.3 V Circuit
+5.3 V is generated from the chopper regulator, IC451 connected to the +15 V output. It has an over voltage protection circuit to prevent abnormal output voltage. The following is the roles of main surrounding circuit.
L452: Filter
R460: Electric current detection resistor
F401, SCR401: Over voltage chopper circuit
D453, R466: Over voltage detection circuit
R467, C465

Bell Amp Circuit
It increases bell signals sent from CPU board in Power Op. Amp, IC452 and sends them into the bell amp. Then, they are sent to the extension boards.

BLOCK DIAGRAM



(2) CPU BOARD

CPU BOARD consists of the following:

CPU Circuit
TSW Circuit
Conference Circuit
Tone Generator Circuit
Clock Generator Circuit
Clock Circuit
Hold Tone Circuit
Battery Back-Up Circuit
Voltage Watching Circuit
RS-232C interface Circuit
Level Signal Generator Circuit

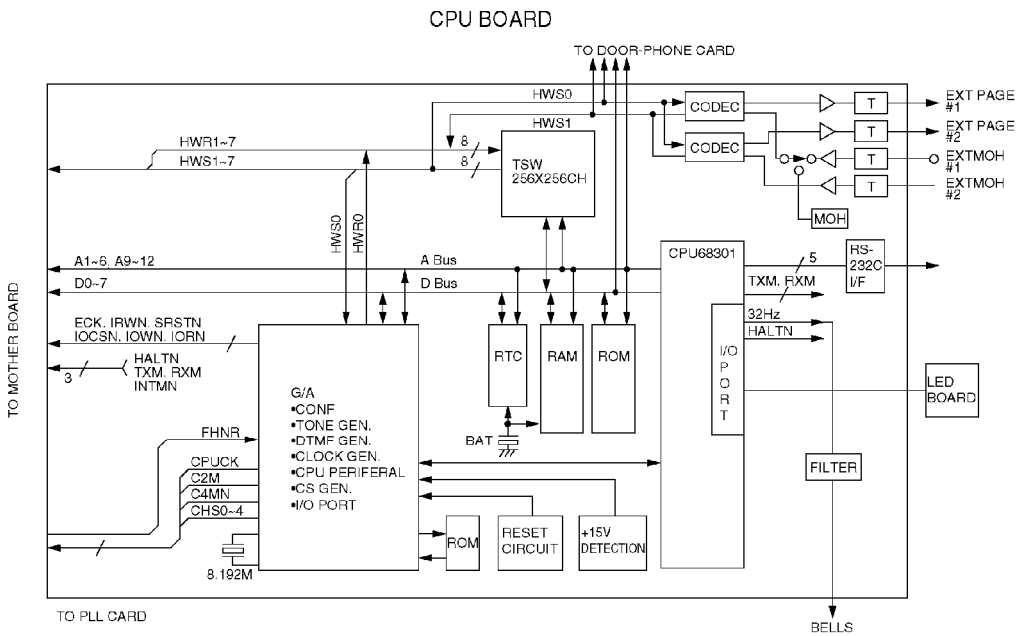
CPU Circuit

Circuit Operation:

16 bit CPU (system clock = 12 MHz)	**(IC1)**
with 68HC000 core CPU	
3 Serial I/O ports	
16 bit Paralleled I/O ports	
3 level Interrupt Controller	
16 bit Timer 3 ch.	
Address Decoder	
DTACK Controller	
8M bit EPROM (Program)	**(IC20, 21)**
4M bit SRAM	**(IC24, 25)**
Address Buffer	**(IC33, 34)**
Data Buffer	**(IC31)**
Control Signal Buffer	**(IC32, 35)**
Gate Array	**(IC2)**
with Address Decoder	
Peripheral Controller	
2 Paralleled Out Ports	
X'tal (12 MHz)	**(X1)**

Composition:

The CPU (IC1) controls the system according to the programs stored in the ROM (IC20, 21). Part of the RAM (IC24, 25) area is backed up by batteries and stores the system data.



TSW Circuit

Composition:

Time Switch IC (IC3)

Circuit Operation:
TSW (Time division Switch) Circuit exchanges totally 256 call channels, which is organized into the PCM highways of 8 lines, and one of the lines is composed of 32 channels. This circuit is integrated into one chip of LSI (IC3), and is controlled by the CPU (IC1) to present the data on the up highways of HWR0 through 7 to the down highways of HWS0 through 7.The uses of each highways are shown below.

HW 0	**Conference Circuit, Tone-DTMF Generator, External paging, Music ON HOLD, Door-phone.**
HW 1	**CO #1~#8**
HW 2	**EXT #1~#8**
HW 3	**EXT #9~#16**
HW 4	**EXT #17~#24**
HW 5	**EXT #25~#32**
HW 6	**CO #9~ #12, DISA**

Conference Circuit

Composition:
Gate Array (IC2)
3 persons×6 conferences controller
1M byte EPROM (Summation Table, Wave Data) (IC19)

Circuit Operation:
Conference Circuit is for enabling the three party conference. This circuit is connected with HWS0 of the down highway and HWR0 of the up highway. After the voice data which are transferred to HWS0 at TSW are processed with the summation in this circuit, and are presented to HWR0 and transferred at TSW (IC13) again. This circuit consists of the Gate Array (IC2) and ROM (IC19). Gate Array (IC2) picks up the voice data, multiplies, makes ROM address, and sends to ROM. Conference operation is added by ROM table. The summation table of the PCM data is stored in ROM. ROM output is sent to Gate Array. Gate Array sets the data on the highway. This circuit covers 3-person×6-conference. This circuit function to reduce 6 dB of 2-persons' level out of 3-person to realize the conference call of 2-CO-person and 1-EXT-person.

Tone Generator Circuit

Composition:

same as Conference Circuit

Circuit Operation:
Tone Generator Circuit presents 4 kinds of the call progress tone and 2 channels of the DTMF tone to DHW0 of the down highway. This circuit consists of the Gate Array (IC2) and ROM (IC19) which are common to the conference circuit. ROM (IC19) are stored in the PCM data of the tone. Gate Array makes ROM address, gets tone data from ROM and sets the data on the highway.

Clock Generator Circuit:

Composition:

same as Conference Circuit

Circuit Operation:
The clock Generator circuit is a circuit which generates PCM clock from X'tal (X1) and Gate Array (IC2). The generated clocks are shown below.

C4MN:	**4.096 MHz**	**Highway clock**
C2M:	**2.048 MHz**	**Highway clock**
FH1N:	**8 kHz**	**Frame pulse**
CHS0~4:	**128, 64, 32, 16, 8 kHz**	**Channel select signal**
CP27~31:	**8 kHz**	**Synchronous signal for CODEC**

The sources of these clocks are the local OSC of 8.192 MHz Crystal (×1). Switching the clock sources is controlled by CPU (IC1).

Clock circuit

Composition:
Real Time Clock IC (IC26)

Circuit Operation:
Clock Circuit is a circuit which gives the clock function for this system, and consists of the clock IC (IC26) backed up by the batteries. This circuit presents one second interruption to CPU (IC1).

Hold tone circuit

Composition:
CODEC IC (IC7, 8)
IC12, T4, T5, etc.

Circuit Operation:
The hold tone circuit is a circuit which presents the hold tone for the system. The tone sources are one system of the internal hold tone (as a local option) and two systems of the external hold tone. The internal hold tone and one of the external hold tone are switchable alternatively to be used (as a local option). The analog signals from the tone sources are changed to the digital ones by CODEC IC (IC6) and presented to HWR0 of the up highway. The external hold tone circuit has AGC function.

External Paging Circuit

Composition:
CODEC IC (IC7, 8)
IC10, T2, T3, etc.

Circuit Operation:
External Paging Circuit is a circuit which presents the voice to the external amplifier. This circuit converts the digital voice data on the HWS0 of the down highway to the analog signals by CODEC, and presents the external paging port. This circuit consists of two systems.

Back Up Circuit

Composition:
BAT, C1 etc.
Back Up Circuit is a circuit which has two functions as follows;

- Back up the CPU (IC1) peripherals for one second when AC power momentarily fails.
- Back up the Clock IC (IC26) and the part of RAM for 7 years.

Circuit Operation:
Back-up is done by the super capacitor (C1) at the momentary AC power failure, and the clock IC and RAM are backed up by the lithium of secondary battery (BAT).

Voltage Watching Circuit

Composition:
Reset IC (IC13)
Q6, 7 etc.

Circuit Operation:
Voltage Watching Circuit is a security circuit which detects the ration of +5 V and +15 V. If +5 V is derated, this circuit resets the system. If +15 V is derated, this circuit presents "L" to I/O port in CPU. The ration of +15 V means AC power off.

RS-232C Interface Circuit

Composition:
Receiver/Driver IC (IC15, 16)
16 bit CPU (IC1)

Circuit Operation:
RS-232C Circuit is a circuit for realizing the data transmission between CPU 68301 (IC1) and a personal computer/printer etc. This circuit consists of a serial interface built in CPU and the level conversion circuit. When the power turns on, the power supply for the RS-232C driver (IC15, 16) is controlled by CPU to prevent the indefinite data presentation.

(3) BASIC CO BOARD
BASIC CO BOARD consists of the following:
Call interface
Parallel I/O Circuit
Timing Signal Generation Circuit

Call Interface Circuit
Call Interface Circuit is a circuit which works as the interface between the call line and the PCM highway, and is classifies as following circuits.

Composition:
(a) Bell Signal Detection Circuit
(b) DC loop formation Circuit

(c) Pulse Dial Transmission Circuit
(d) 2 W~4 W Lines Conversion Circuit
(e) A/D, D/A Conversion Circuit
Call Interface Circuit consists eight lines corresponding to each call line.
(Transfer circuit at power failure are four lines.)

Circuit Operation:

(a) Bell Signal Detection Circuit
When CO line is idle, EXRLY pin of IC 111 is low, photocoupler PC101, PC102 are OFF. BELL pin of IC111 is high. When there is an incoming signal at the CO line, the call signal is rectified by zener diode D102 and D103 and photocoupler PC101, current flows to the photocoupler PC101 and PC101 turns ON. This causes BELL pins of IC111 to change form a high to low. This change is detected as incoming call thus processing are executed.

Call Signal Path:
Tip-L102-L104-PC101(1-2)-R101-C102-L103-L101-SA103(4-2)-Ring

(b) DC Loop Formation Circuit
In the off-hook mode, EXRLY of IC111 is low.

DC Loop Path:
Tip-L102-L104-R118-D101(-+)-PC102(4-3)-Q101
D101(-)-F100-L103-L101-SA103(4-2)-Ring

(c) Pulse Dial Transmission Circuit
When off-hook, pulse dial transmission is executed by alternating on-hook and off-hook.
On-hook and off-hook is controlled by PC102. During the make position, dial pin of IC111 is low level and PC102 is ON. During the break position, dial pin of IC111 is high level and PC102 is OFF. At this time, BELL pin of IC111 become a low. Afterwards, BELL pin of IC111 monitors for a change (low to high) for mote than 400ms. If more than 400 ms has been detected it assumes that an on-hook state has occurred and the CO line circuit is restored to the idle state. The voice signal is transmitted into the system via transformer T101.

(d) 2W-4W Lines Conversion Circuit
This circuit converts 2-line analog signals from CO line to 4-line signals. The voice analog signal form the line is outputted from T101 to the 2-4 Line Conversion Circuit, and the circuit flow is T101(4-6)-R116-5pin of IC102
IC102 is a CODEC. The voice analog signal is converted to PCM signal by this CODEC. PCM signal from TSW is converted to voice analog signal by the CODEC. And the circuit flow is as following.
2pin of IC102-IC108/R112-2 pin of IC101-R107-T101

(e) A/D, D/A Conversion Circuit
This circuit is for conversion between 4-line analog signals and the PCM digital signals. CODEC(IC102) has a power down function at no operation and a μ /A law switching over function, and are controlled through the parallel I/O port.

Parallel I/O Circuit

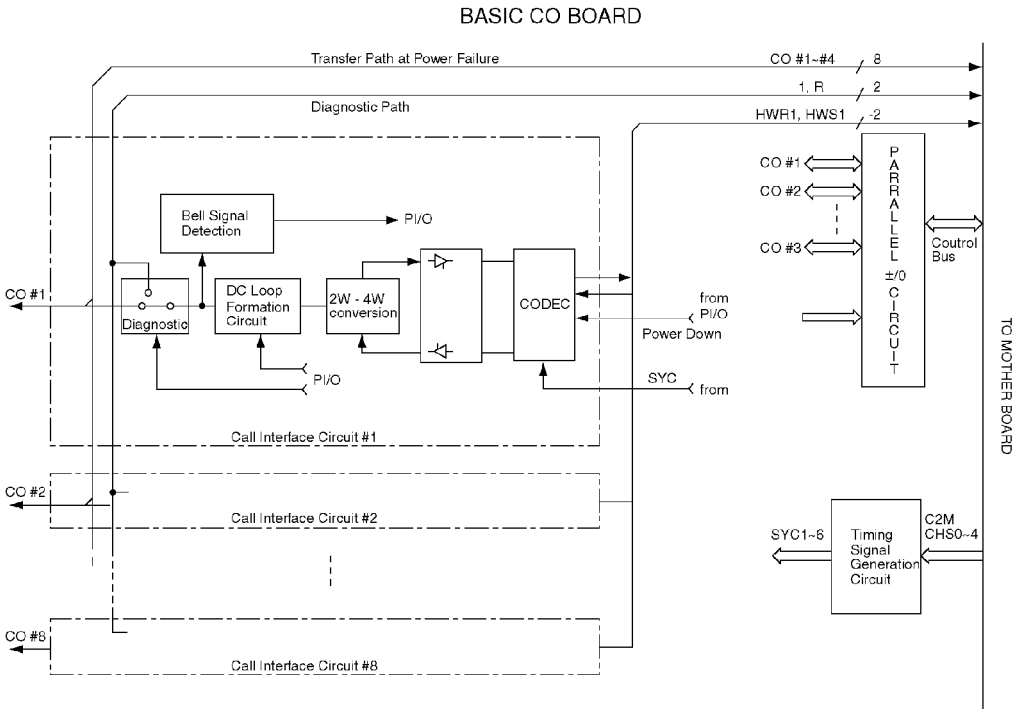
Composition:
Gate Array
IC114, 116, 117, 121, 123

Circuit Operation:
Parallel I/O Circuit is a I/O port for controlling the Call Interface Circuit, and is composed of one gate array, (IC111).

Timing Signal Generation Circuit

Composition:
IC112, 120, 121, 122

Circuit Operation:
Timing Signal Generation Circuit is a circuit which generates the synchronous signals for CODEC. It generates eight kinds of signals from the channel select signals (CH0-4) presented by the CPU BOARD and from the highway clock (C2M).



(4)BASIC EXT BOARD

BASIC EXT BOARD consists of the following:

Analog Telephone Circuit

DTMF Receiver Circuit

AIT Data Communication Circuit

HDLC Controller

APT Data Transmission And Reception Circuit

Parallel /O Port

Timing Signal Generation Circuit

Analog Telephone Circuit

Analog Telephone Circuit is composed of the following circuit, this consists of eight circuit corresponding to each extension line.

Composition:

(a) Current Supply Circuit

(b) Hook Detection Circuit

(c) Ring Trip Detection Circuit

(d) 2-4 Lines Conversion Circuit

(e) A/D and D/A Conversion Circuit

(f) Transfer Circuit at Power Failure

(g) Diagnostic Circuit

Circuit Operation:

(a) Current Supply Circuit

Current Supply Circuit is constant-current circuit which supplies the call current to SLT. Its

voltage is ±15V.
With the telephone off-hook, a DC loop is formed, and current is supplied to the telephone. This current is limited to about 30 mA by D204, D205, R205, D206, D207 and R208 respectively. (+15 V)-R206-R205-Q203-RLY202 (b-c)-L204-RLY200 (m-c)-Telephone-RLY200 (c-m)-L205-RLY202 (c-b)-Q204-R208-R209-(-15V)

(b) Hook Detection Circuit
Hook Detection Circuit is a circuit which detects On-hook or OFF-hook of SLT when the bell signals are not presented, and detects the dial pulse as well. When the telephone handset is taken off the hook, a DC loop is formed and current flows to Q205. Because of this, the collector of Q205 changes from high to low, thus HOOK pin of IC211 becomes low, and the CPU detects an off-hook condition. When the handset is replaced back on hook, the DC loop is interrupted and current no longer flows to Q205 and the collector of Q205 goes high and the CPU assumes an on-hook condition.

(c) Ring Trip Circuit
This circuit is for detecting Off-hook of SLT when the bell signals are presented.
Normally Q206 is OFF during transmission of the bell signal. When answering the telephone, the DC loop of the call signal circuit is established, Q206 then turns ON, and base of Q207 becomes low. Because of this, the collector of Q207 becomes high and RLY202 is reset. With resetting of RLY202, the loop of bell signal circuit is interrupted and the DC loop of the call circuit is established.

(d) 2W-4W Lines Conversion Circuit
This circuit converts 2-line analog signals from SLT and APT to 4-line signals. The voice analog signal from the line is outputted from C205 to the 2-4 Line Conversion Circuit, and the circuit flow is C205-R219-6 Pin of IC202-R217-5 Pin of IC201
IC201 is a CODEC. The voice analog signal is converted to PCM signal by the CODEC.
PCM signal from TSW is converted to voice analog signal by the CODEC. And the circuit flow is as following.
2 Pin of IC201-C208-R215-2Pin of IC202-R211-C205-RLY202 (B-C)-L204-RLY200 (M-C)-Telephone

(e) A/D and D/A Conversion Circuit
This circuit is for conversion between 4-line analog signals and the PCM digital signals. CODEC (IC201) has a power down function at no operation and a μ /A law switching over function, and is controlled through the parallel I/O port.

(f) Transfer Circuit at Power Failure
This circuit is a circuit for connecting directly between CO line and SLT when the power fails. The call line is automatically changed to the direct call mode when the voltage of +15V is derated (Power down). It is controllable through I/O port as well. This circuit exists only in the extension of #1 and CO #3~4 are connected with EXT #9~#19. This circuit maintains the current mode for over one second when AC power fails momentarily.

When power fails or 117 pin of IC211 becomes low, collector of Q221 is high, RLY200 turns OFF and make the path.

DTMF Receiver Circuit

Composition:
DTMF Receiver IC (IC215, IC216)
8 → R1 Analog Switches (IC217, IC218)

Circuit Operation:
DTMF Receiver Circuit is a circuit for receiving the DTMF dials presented by STL and APT. This circuit is composed of the 8 → 1 Analog Switches (IC217, 218) and the DTMF Receiver IC (IC215, 216). This circuit is incorporated two lines on card, each line is connected through the eight extensions and the analog switches (IC217, 218) to the DTMF receiver IC (IC215, 216).The received data of DTMF receiver are read through the data bus by the main CPU (IC1).

APITS Data Communication Circuit

Composition:
Gate Array (IC211)

Circuit Operation:
APT Data Communication Circuit is a circuit which performs the serial/parallel conversion of the control data between APT comm. paths and the main CPU (IC1). This circuit covers 8lines corresponding to each extension, and 8 line are integrated into on Gate Array (IC211).

HDLC Controller

Composition:
HDLC Controller IC (IC213)

Circuit Operation:
HDLC Controller is a circuit which functions the data format conversion of the D channel between the DPITS comm. line installed with a Gate Array (IC211) and the CPU data bus by following the HDLC protocol. The serial/parallel conversion is done at the same time. Though this circuit communicates with 8 channel of the DPITS comm. circuit, since it can communicate only with one channel at a time, as before mentioned it, switches the communicating extension every

for 8 ms. This circuit is composed of one IC (IC213).

APT Data Transmission and Reception Circuit

Composition:
Q201, Q208, IC203, T201 etc.

Circuit Operation:
The circuit functions the wave shaping and the level conversion between the date line from the telephone terminal and the Gate Array (IC211), and supplies the current to the terminal through the data line. The data communication is done through this circuit with any kinds of the terminal whichever APT.
This circuit consists of the drive circuit (Q201, Q208, etc.), the receive circuit (IC203) and the transformer (T201).

Parallel I/O Port

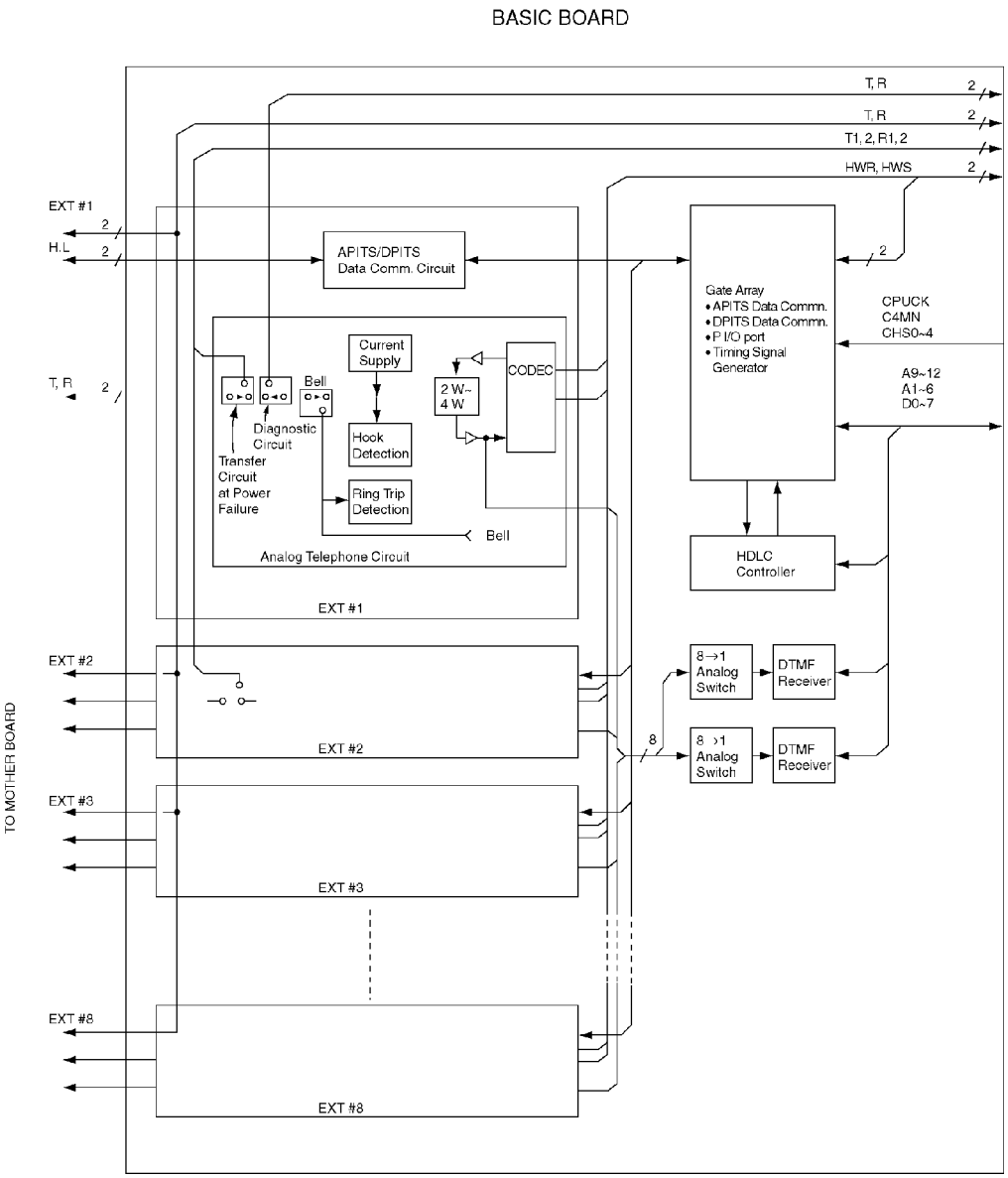
Composition:
Gate Array (IC211)

Circuit Operation:
This circuit is a circuit which controls the analog telephone circuit, and integrated into the Gate Array(IC211).

Timing Signal Generation Circuit

Composition:
Gate Array (IC211)

Circuit Operation:
This circuit is a circuit which generates the synchronous signal for CODEC (IC201) and the frame pulse for the HDLC controller (IC213). These signals are generated from the channel select signals (CHS0~4) and the highway clock (C4MN) presented by the CPU Board and integrated into the Gate Array (IC211).



8.2. RESOURCE OF OPTION

(1) EXPANSION CO UNIT (KX-TA123280)

The circuit on this unit has the following differences from the BASIC CO BOARD. Others are the same as the basic one.

- Number of CO lines are four.

- One line paths for the transfer at power failure.

(2) EXPANSION EXT UNIT (KX-TA123270)

The circuit on this unit has the following differences from the BASIC EXE BOARD. Others are the same as the basic one.

- No diagnostic circuit for CO BOARD

- One line paths for the transfer at power failure

(3) DOOR-PHONE UNIT (KX-TA123260)
DOOR-PHONE UNIT consists of the following:
Door-Phone Interface Circuit
Door Opener Circuit

Door-Phone Interface Circuit
Door-Phone Interface Circuit is a circuit which functions the interface between the door-phone and the PCM highway, and is composed of the following circuits.

Composition:
(a) Circuit for detection whether the door-phone is connected or not.
(b) Current supply circuit
(c) Hook detection circuit
(d) 2-4lines conversion circuit
(e) A/D and D/A conversion circuit(CODEC)IC2

Circuit Operation:

(a) Circuit for detection whether the Door-Phone is connected or not.
When the Door-Phone is not connected, base of Q2 is high.When collector of Q2 is low, input pin of IC5 is low. When the Door-Phone is connected, base of Q2 is low. When collector of Q2 is high, input pin of IC5 is high. CPU (IC1) on CPU BOARD gets information through IC5 whether the Door-Phone is connected or not.

(b) Current Supply Circuit
Q3 supplies current to the Door-Phone line through the transformer (T1).

(c) Hook Detection Circuit
When the call button of Door-Phone isn't pushed, base of Q1 is high. When collector of Q1 is low, input pin of IC5 is low. When the call button of Door-Phone is pushed, base of Q1 is low. When collector of Q1 is high, input pin of IC5 is high. CPU (IC1) on CPU BOARD gets information through IC5 whether the call button is pushed or not.

(d) 2-4Lines Conversion Circuit
This circuit converts 2-line analog signals to 4-line signals.

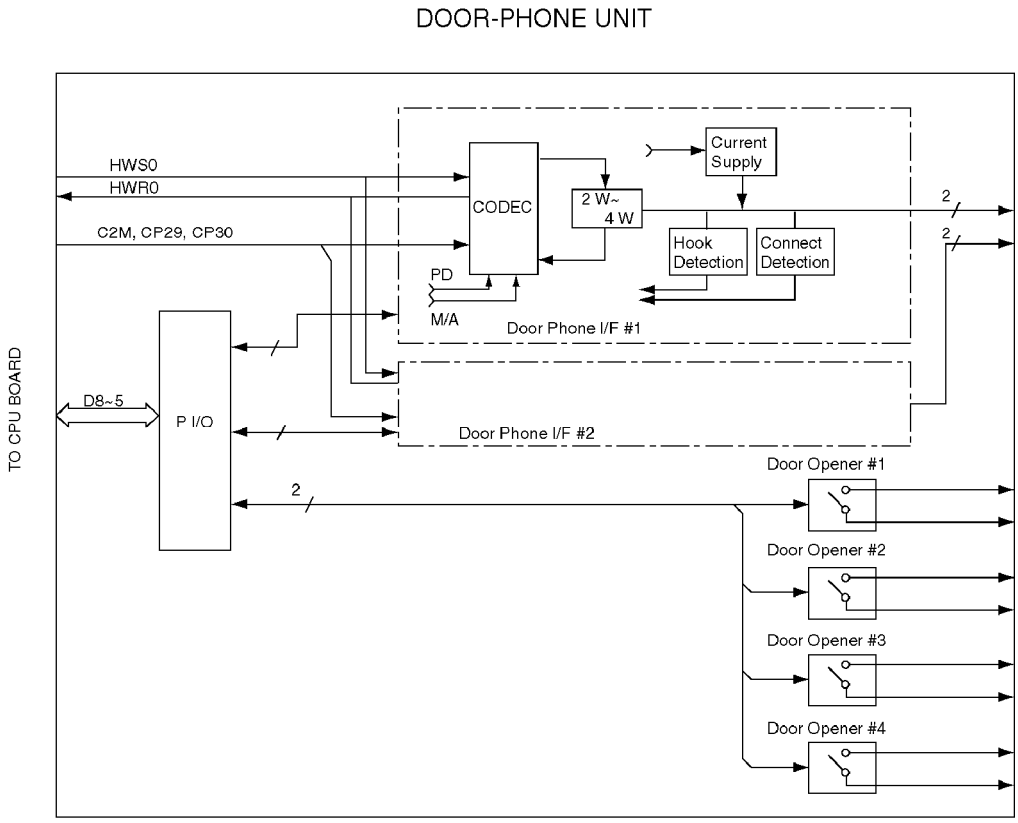
(e) A/D, D/A Conversion Circuit
This circuit is for converting the analog signals from Door-Phone to the PCM digital signals to present to the PCM highway, and also converting the data on the PCM highway into the analog signals to the Door-Phone. This circuit has the power down function and the μ /A conversion

function.

Door Opener Circuit
This is the relay circuit which controls the Door Opener connected externally. The control is made through the parallel I/O port (IC4). Four of this circuit are installed on a card.

Composition:
IC4, Q7, RLY1, etc.

Circuit Operation:
When CPU (IC1) on CPU BOARD make I/O port (IC4) high, transistor (Q7) controls the relay (RLY1) ON. When CPU (IC1) on CPU BOARD make I/O port low, transistor controls the relay OFF.



(5) DISA CARD (KX-TA123291)
DISA CARD consists of the following.
CPU Circuit
Parallel FIFO (First In First Out) Memory Circuit
ADPCM CODEC Circuit

OGM (Out Going Message) Memory Circuit
DTMF Repeat Circuit
End of Call Detection Circuit
Highway Control Circuit
Timing Signal Generator Circuit

CPU Circuit

Composition:
68C03 8 bit CPU (IC1)
ROM 256 kbite (IC2)
SRAM 8 kbit (IC3)
IC7, IC25, IC27, IC32, IC36, IC46

Circuit Operation:
This circuit is a circuit which controls the DISA CARD according to the program in the ROM (IC2) by the CPU (IC1). It is connected with main CPU on CPU BOARD through the parallel FIFO Circuit, and controls this card by following the commands from the main CPU.

Parallel FIFO Memory Circuit

Composition:
Gate Array (IC5)
IC6, IC37, IC38, IC39, IC40, IC41

Circuit Operation:
Parallel FIFO Memory Circuit is a circuit which functions the data communication interface between the DISA-CPU and the main CPU on CPU BOARD. This circuit has each 16 bite buffer in the up and down directions. This FIFO memory is functioned by Gate Array(IC5).

ADPCM CODEC Circuit

Composition:
ADPCM IC (IC53,IC54)
CODEC IC (IC57,IC58,IC61)
AGC Circuit (IC70,Q7,Q8, etc)
Path Selector (IC37,IC38,IC42,IC43)

Circuit Operation:
This circuit is a circuit which converts the ADPCM data of OGM (Out Going Message) stored in

RAM (IC48, IC49) into the PCM CODEC data, and presents to UHW 0 of the up highway.
Two of this circuit are installed on one card, and one of them has the OGM recording function as well. In another words, it takes in the PCM CODEC data on DHW 6 of the down highway through the AGC circuit and converts to the ADPCM codes.
The data transmission between this circuit and RAM (IC48, IC49) is done by CPU (IC1). The transmitting rate is 1 Bite/250 μ S. This circuit is composed of the ADPCM IC with serial/parallel converter and parallel/serial converter (IC53, IC54), CODEC IC (IC57,IC58, IC61) and the AGC Circuit (only one circuit).
The coding rate of ADPCM is 32 Kbps.

OGM Memory Circuit

Composition:
SRAM 2 Mbit (IC48, IC49)
Battery (BAT), etc.

Circuit Operation:
This circuit is RAM (IC48,IC49) which is stored the ADPCM data of OGM by CPU (IC1). With 2 Mbit capacity, two messages each for 32 seconds can be recorded. This circuit is backed up by battery (BAT).

DTMF Repeat Circuit

Composition:
CODEC IC (IC520, IC21)
Filter IC (IC13, IC14)
DTMF Transceiver IC (IC9,IC10)

Circuit Operation:
This circuit is a circuit which receives the DTMF signal (IC9,10) through the highway (IC20-IC13,IC21-IC14) once and resends (IC9,10) to the highway (IC20,IC21) to cover the level reduction of the DTMF tone caused by the line loss during CO-CO call. Normally, output of this circuit is open, and once it detects the DTMF signal(IC9,10)at CO-CO call, the output connects with UHW 6 of the up highway and then resends the DTMF signal (IC9,10).
Also this circuit is used as the DTMF receiver (IC9,10), and receives the secondary dial when the DISA signal incoming.
Two of this circuit are installed on one card (TS16,TS18 of DHW6).

End of Call Detection Circuit

Composition:
PI0 (IC4)
IC24, IC26, IC28, IC30, etc.

Circuit Operation:
This circuit is a circuit which detects the end of call at CO-CO call.
It converts whether the voice exits or not into the logic level (IC24, 26, 28, 30), then presents it to CPU (IC1) through P10 (IC4). There are three methods for detecting the end of call as follows.

- No tone detection
- Cyclic tone detection
- Continuous tone detection

The four of this circuit are installed corresponding to each time slot of TS16~19.

Highway Control Circuit

Composition:
IC37, IC42, IC43, IC67, IC71

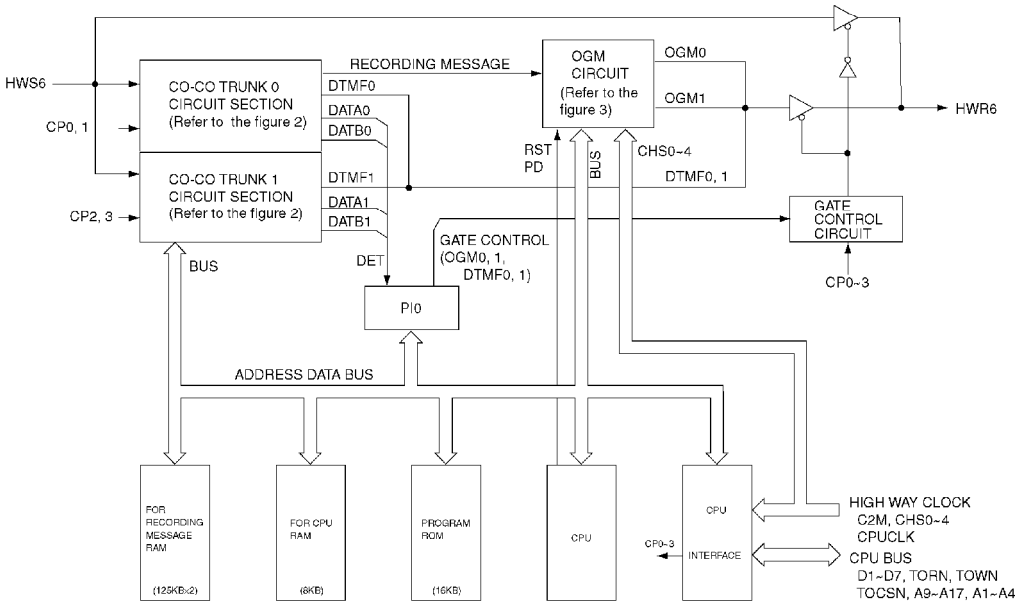
Circuit Operation:
This circuit is a circuit which transfers the data in the HWS 6 of the down highway onto HWR 6 of the up highway for calling between CO and CO. TS16~19 are controlled individually.
The CPU (IC1) controls the gate IC (IC34, 42, 43, 67, 71) through PI0 (IC4), connects DHW 6 and UHW 6.

Timing Signal Generator Circuit

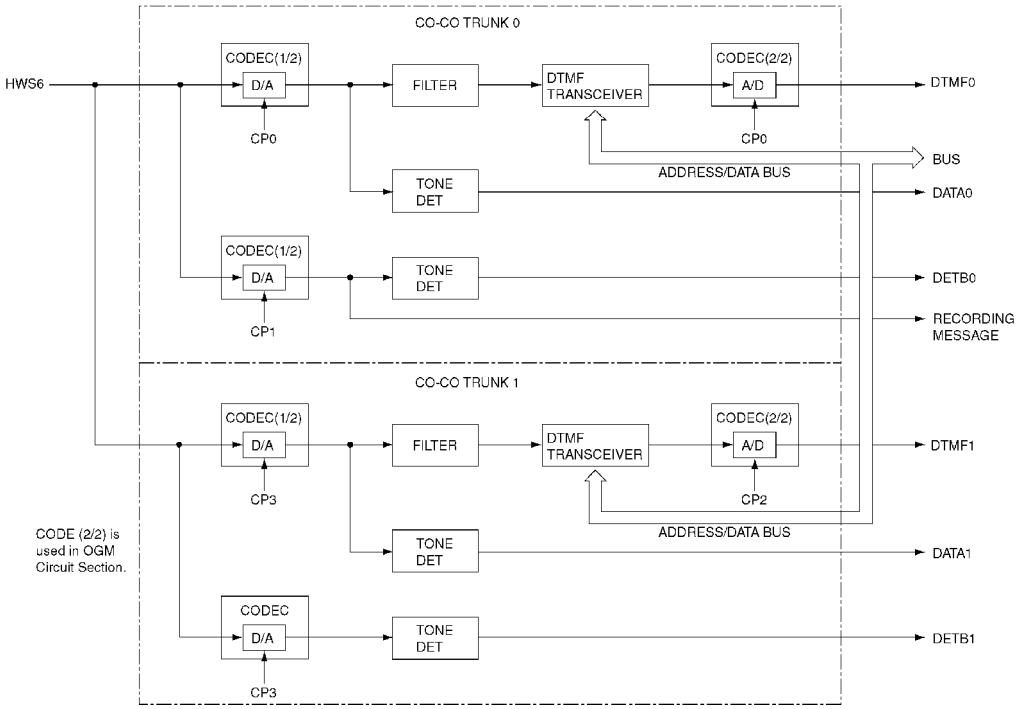
Composition:
IC39, IC40, IC62, IC63, IC64, IC65

Circuit Operation:
This circuit is a circuit which generates the timing signals for using for ADPCM, CODEC Circuit and Highway Control Circuit. These signals are generated from the channel select signals (CH0~4) and the highway clock (C2M, C4MN) which are presented from the CPU BOARD.

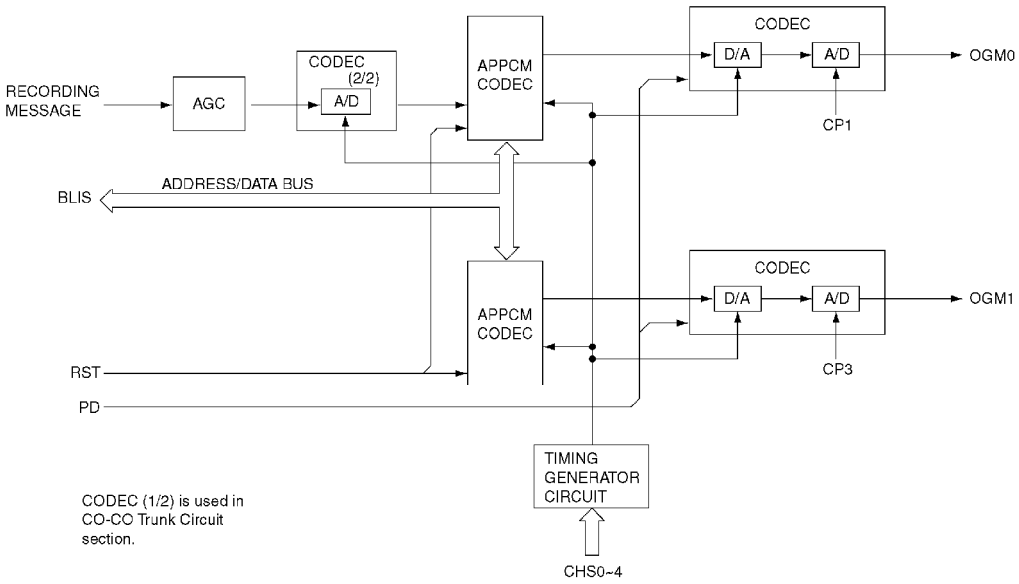
DISA BLOCK DIAGRAM



CO-CO TRUNK 0, 1 CIRCUIT



OGM CIRCUIT SECTION



(7) CALLER ID CARD (KX-TA123293)
CALLER ID CARD consists of the following:
MODEM Signal Receiver Circuit
Serial/Parallel Converter Circuit
Over voltage Protector Circuit

MODEM Signal Receiver Circuit

Composition:
IC301, IC302, IC303, IC304, etc.

Circuit Operation
This circuit converts the MODEM signals sent between the bell signals into the serial signals. The baud rate of the MODEM signals is 300 bps. This circuit is composed of one IC (IC301, IC302, IC303, IC304), and four of this circuit are installed corresponding to each CO line.

Serial/Parallel Converter Circuit

Composition:
IC305, IC306, etc.

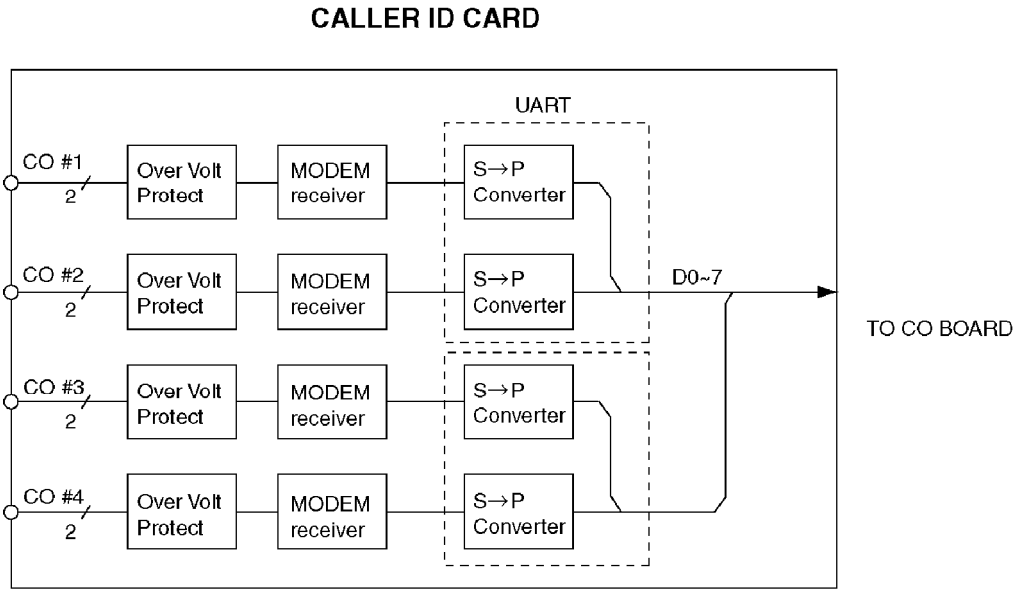
Circuit Operation:
This circuit converts the serial data presented from the MODEM signal demodulator into the parallel data for the main CPU to read them.

Four of this circuit are installed corresponding to each CO line. Two of this circuit are incorporated in one IC.

Over Voltage Protector Circuit

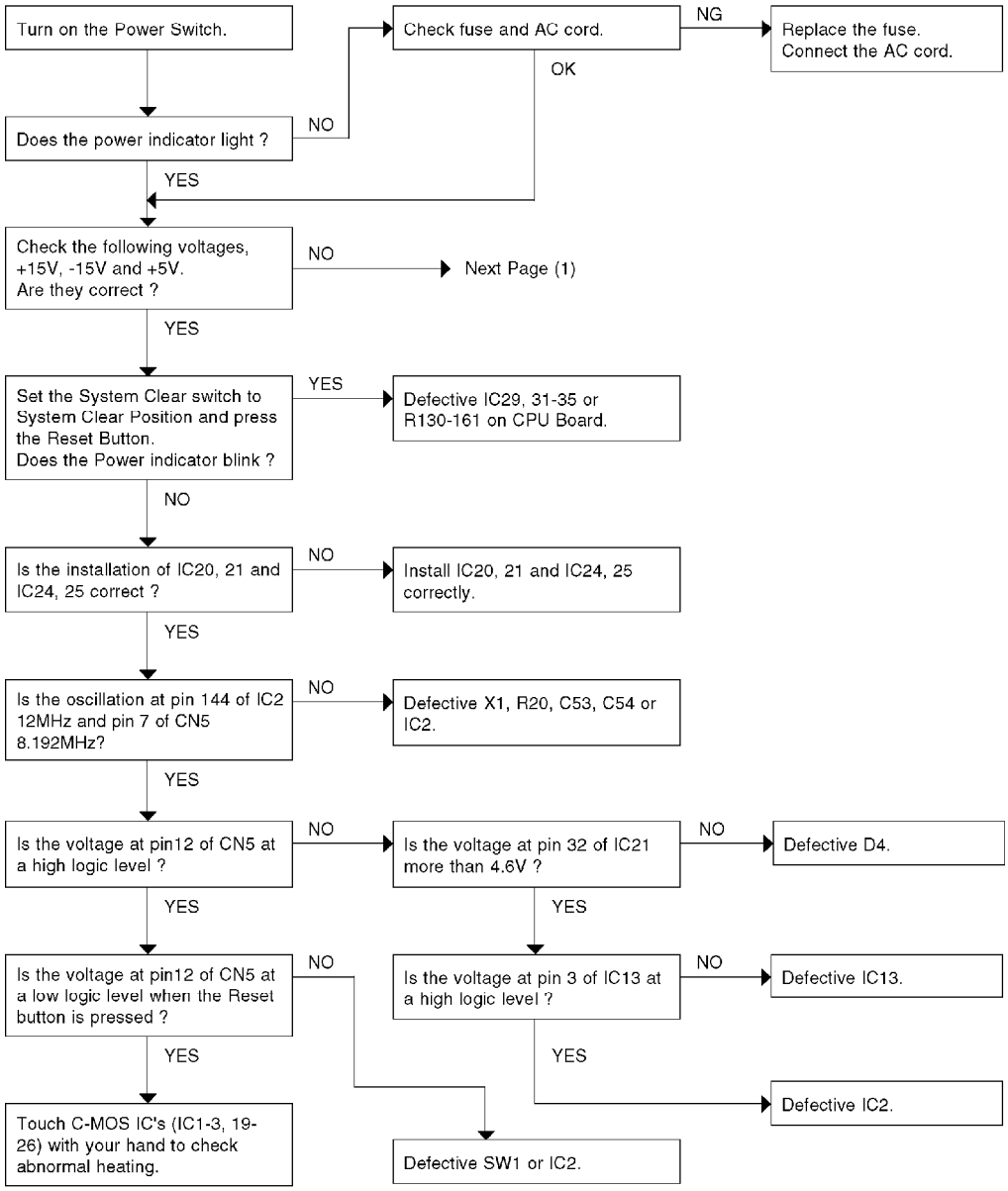
Composition:
D301~316 etc.

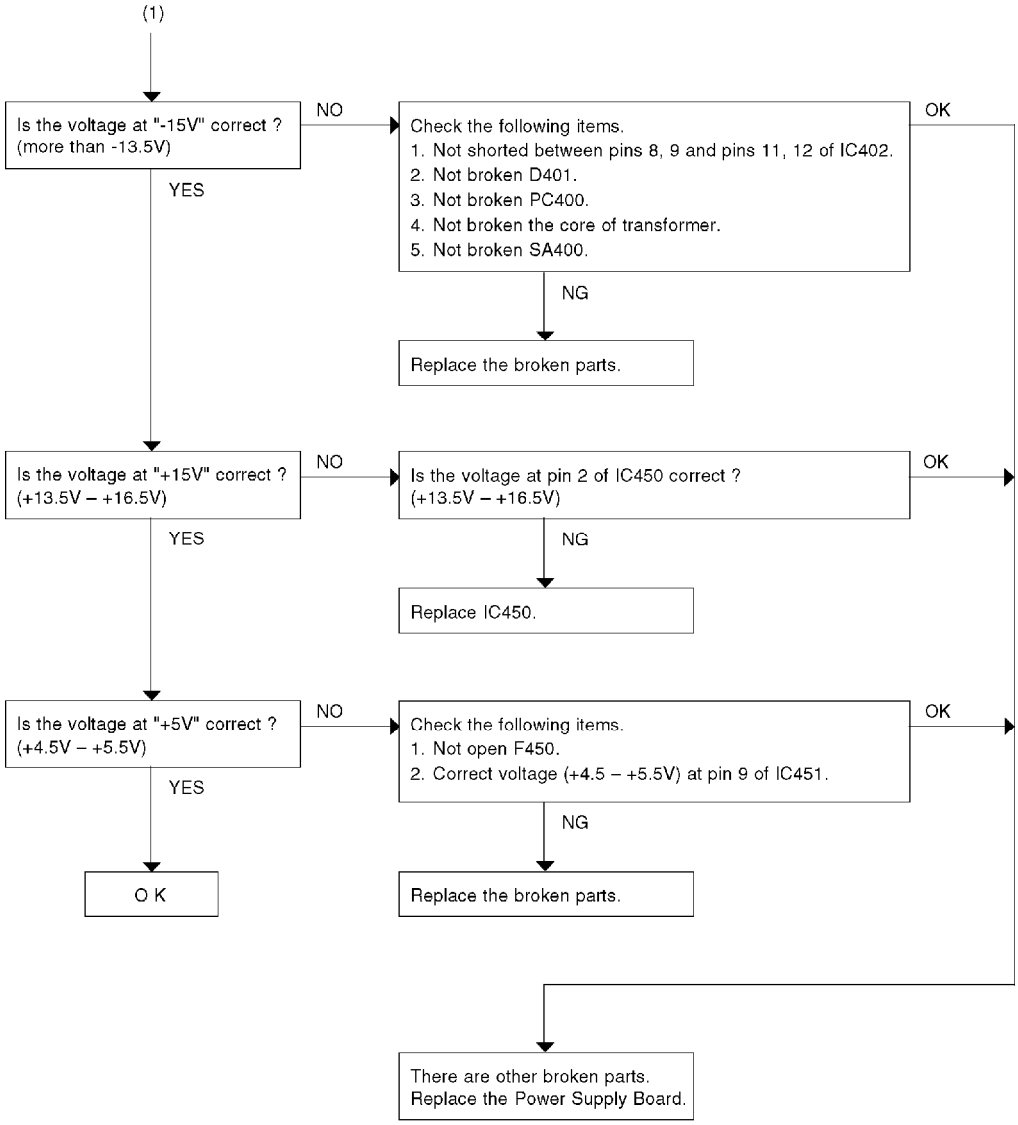
Circuit Operation:
This circuit protects the MODEM receiver from the bell signal on the CO line.



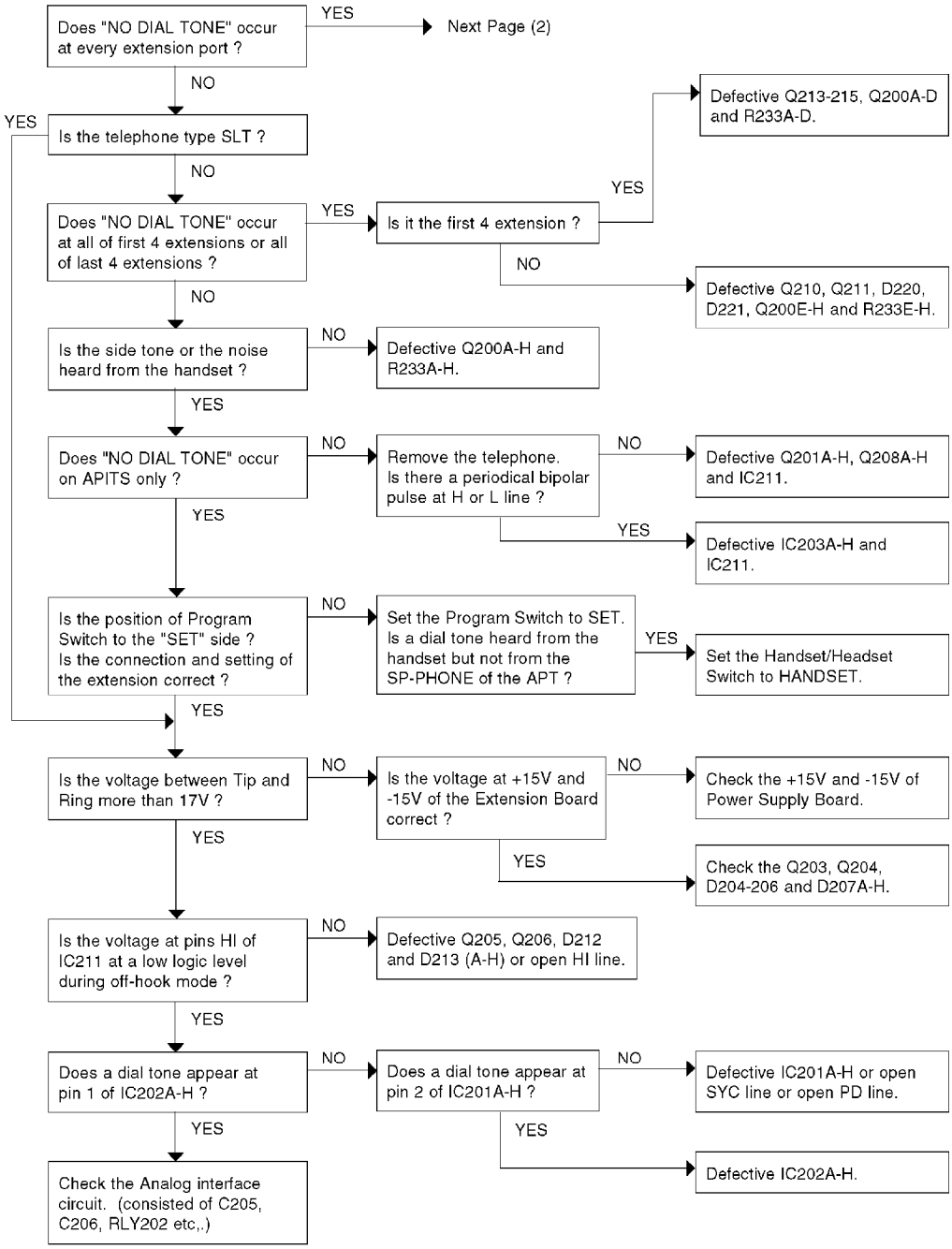
9. TROUBLE SHOUTING

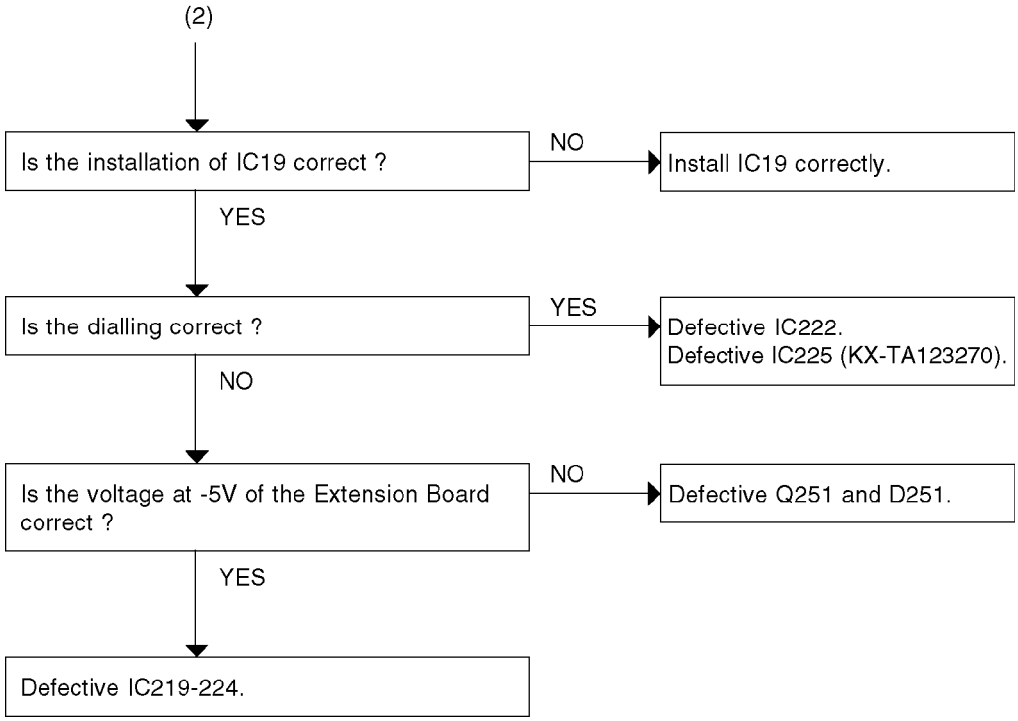
9.1. NO OPERATION (CHECK POWER SUPLLY UNIT, CPU BOARD)


Turn on the Power Switch.
Check fuse and AC cord.
NG
Replace the fuse.
Connect the AC cord.
OK
Does the power indicator light ?
NO
YES
Check the following voltages,
+15V, -15V and +5V.
Are they correct ?
NO
Next Page (1)
YES
Set the System Clear switch to System Clear Position and press the Reset Button.
Does the Power indicator blink ?
YES
Defective IC29, 31-35 or R130-161 on CPU Board.
NO
Is the installation of IC20, 21 and IC24, 25 correct ?
NO
Install IC20, 21 and IC24, 25 correctly.
YES
Is the oscillation at pin 144 of IC2 12MHz and pin 7 of CN5 8.192MHz?
NO
Defective X1, R20, C53, C54 or IC2.
YES
Is the voltage at pin12 of CN5 at a high logic level ?
NO
Is the voltage at pin 32 of IC21 more than 4.6V ?
NO
Defective D4.
YES
YES
Is the voltage at pin12 of CN5 at a low logic level when the Reset button is pressed ?
NO
Is the voltage at pin 3 of IC13 at a high logic level ?
NO
Defective IC13.
YES
YES
Defective IC2.
Touch C-MOS IC's (IC1-3, 19-26) with your hand to check abnormal heating.
Defective SW1 or IC2.

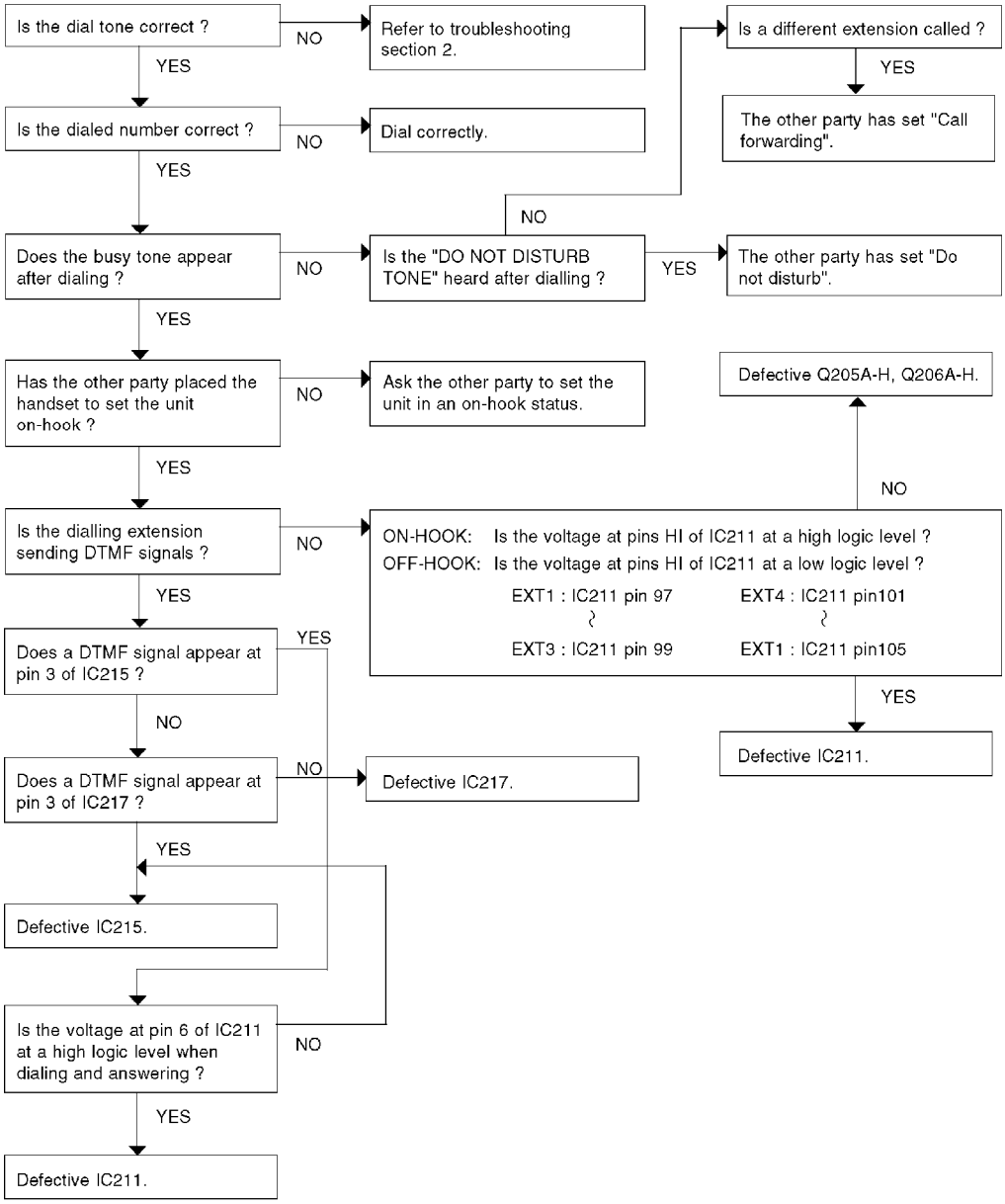


9.2. NO DIAL TONE (CHECK EXTENSION BOARD)

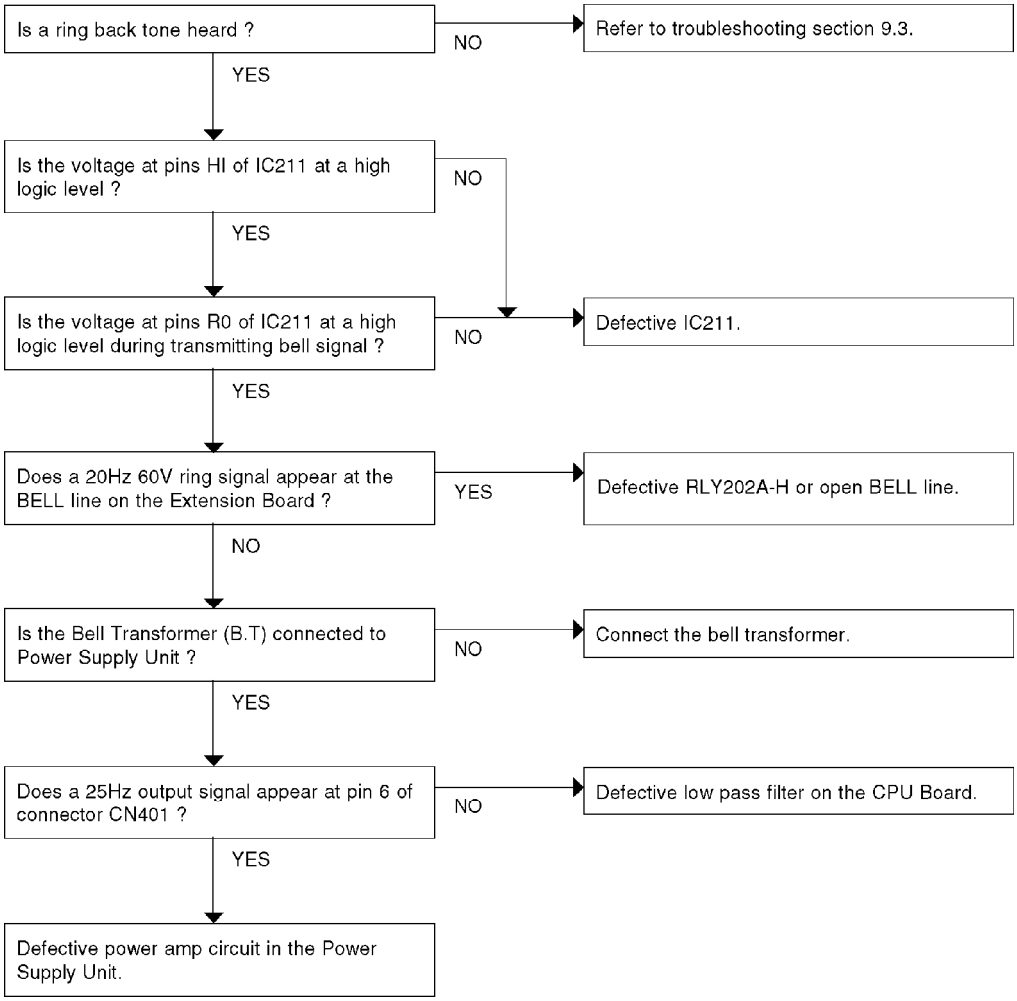

Does "NO DIAL TONE" occur at every extension port ?
YES
Next Page (2)
NO
YES
Is the telephone type SLT ?
NO
Does "NO DIAL TONE" occur at all of first 4 extensions or all of last 4 extensions ?
YES
Is it the first 4 extension ?
YES
Defective Q213-215, Q200A-D and R233A-D.
NO
Defective Q210, Q211, D220, D221, Q200E-H and R233E-H.
NO
Is the side tone or the noise heard from the handset ?
NO
Defective Q200A-H and R233A-H.
YES
Does "NO DIAL TONE" occur on APITS only ?
NO
Remove the telephone. Is there a periodical bipolar pulse at H or L line ?
NO
Defective Q201A-H, Q208A-H and IC211.
YES
YES
Defective IC203A-H and IC211.
Is the position of Program Switch to the "SET" side ? Is the connection and setting of the extension correct ?
NO
Set the Program Switch to SET. Is a dial tone heard from the handset but not from the SP-PHONE of the APT ?
YES
Set the Handset/Headset Switch to HANDSET.
YES
Is the voltage between Tip and Ring more than 17V ?
NO
Is the voltage at +15V and -15V of the Extension Board correct ?
NO
Check the +15V and -15V of Power Supply Board.
YES
YES
Check the Q203, Q204, D204-206 and D207A-H.
Is the voltage at pins HI of IC211 at a low logic level during off-hook mode ?
NO
Defective Q205, Q206, D212 and D213 (A-H) or open HI line.
YES
Does a dial tone appear at pin 1 of IC202A-H ?
NO
Does a dial tone appear at pin 2 of IC201A-H ?
NO
Defective IC201A-H or open SYC line or open PD line.
YES
YES
Defective IC202A-H.
Check the Analog interface circuit. (consisted of C205, C206, RLY202 etc,.)



9.3. CANNOT DIAL (CHECK EXTENSION BOARD)

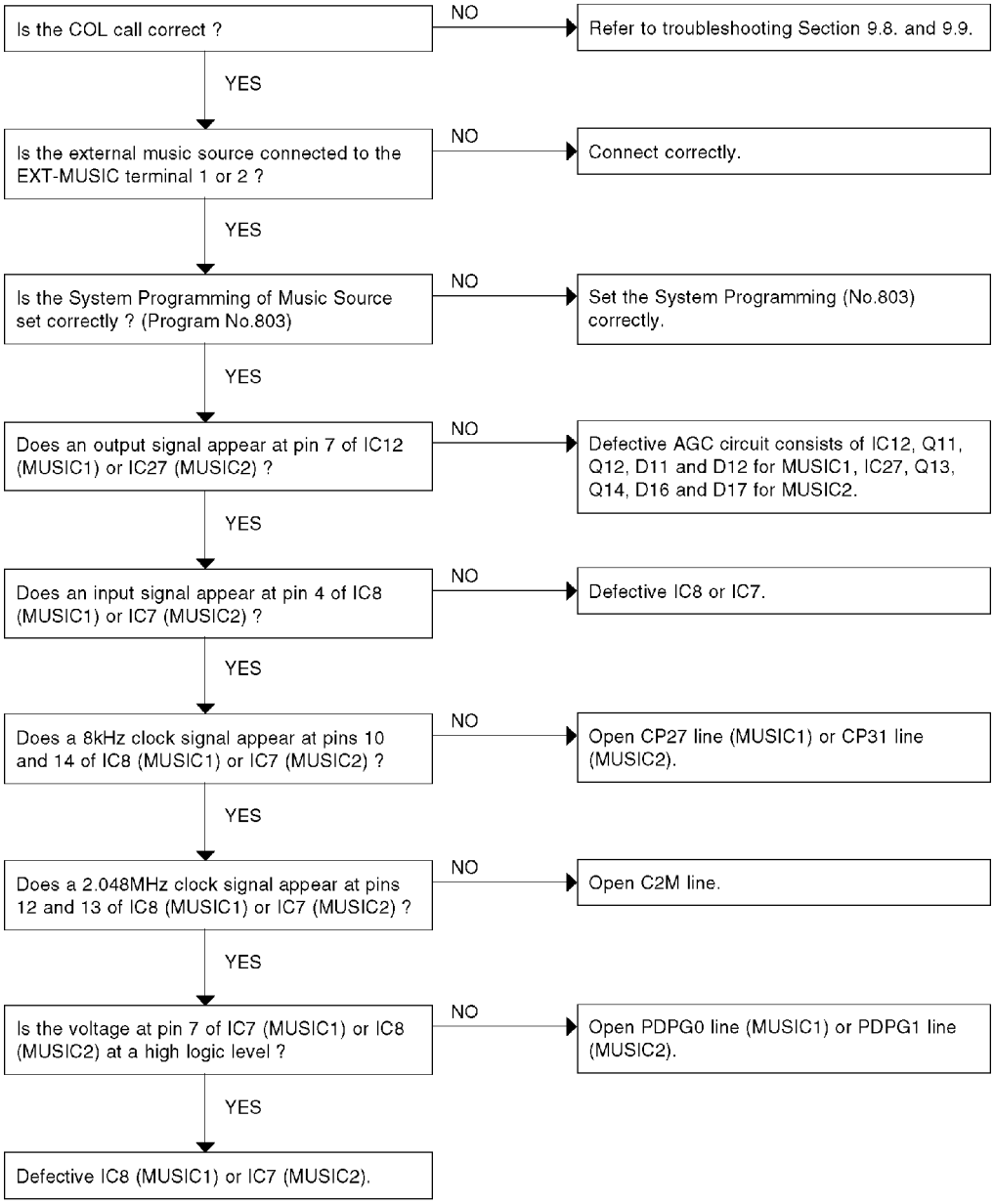

Is the dial tone correct ?
NO
Refer to troubleshooting section 2.
YES
Is a different extension called ?
YES
The other party has set "Call forwarding".
Is the dialed number correct ?
NO
Dial correctly.
YES
NO
Does the busy tone appear after dialing ?
NO
Is the "DO NOT DISTURB TONE" heard after dialling ?
YES
The other party has set "Do not disturb".
YES
Has the other party placed the handset to set the unit on-hook ?
NO
Ask the other party to set the unit in an on-hook status.
Defective Q205A-H, Q206A-H.
YES
NO
Is the dialling extension sending DTMF signals ?
NO
ON-HOOK: Is the voltage at pins HI of IC211 at a high logic level ?
OFF-HOOK: Is the voltage at pins HI of IC211 at a low logic level ?
EXT1 : IC211 pin 97 ~ EXT3 : IC211 pin 99
EXT4 : IC211 pin101 ~ EXT1 : IC211 pin105
YES
Does a DTMF signal appear at pin 3 of IC215 ?
YES
YES
Defective IC211.
NO
Does a DTMF signal appear at pin 3 of IC217 ?
NO
Defective IC217.
YES
Defective IC215.
Is the voltage at pin 6 of IC211 at a high logic level when dialing and answering ?
NO
YES
Defective IC211.

9.4. CANNOT ACCESS AN EXTENSION (CHECK EXTENSION BOARD, POWER SUPPLY UNIT AND CPU BOARD)

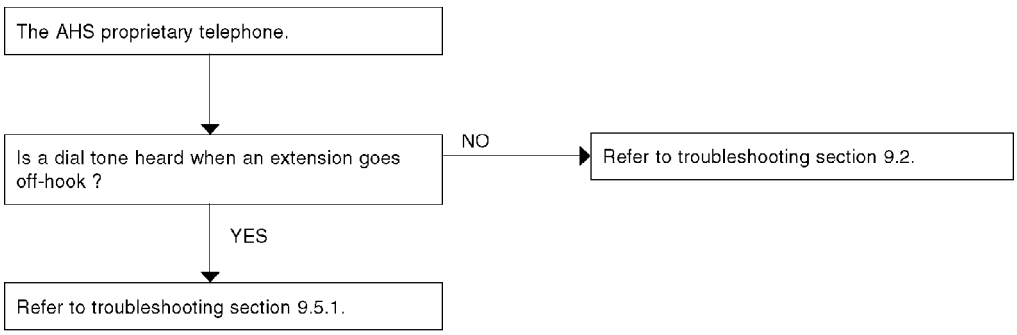

Is a ring back tone heard ?
NO
Refer to troubleshooting section 9.3.
YES
Is the voltage at pins HI of IC211 at a high logic level ?
NO
YES
Is the voltage at pins R0 of IC211 at a high logic level during transmitting bell signal ?
NO
Defective IC211.
YES
Does a 20Hz 60V ring signal appear at the BELL line on the Extension Board ?
YES
Defective RLY202A-H or open BELL line.
NO
Is the Bell Transformer (B.T) connected to Power Supply Unit ?
NO
Connect the bell transformer.
YES
Does a 25Hz output signal appear at pin 6 of connector CN401 ?
NO
Defective low pass filter on the CPU Board.
YES
Defective power amp circuit in the Power Supply Unit.

9.5. CANNOT SEND A HOLD TONE (CHECK CPU BOARD)

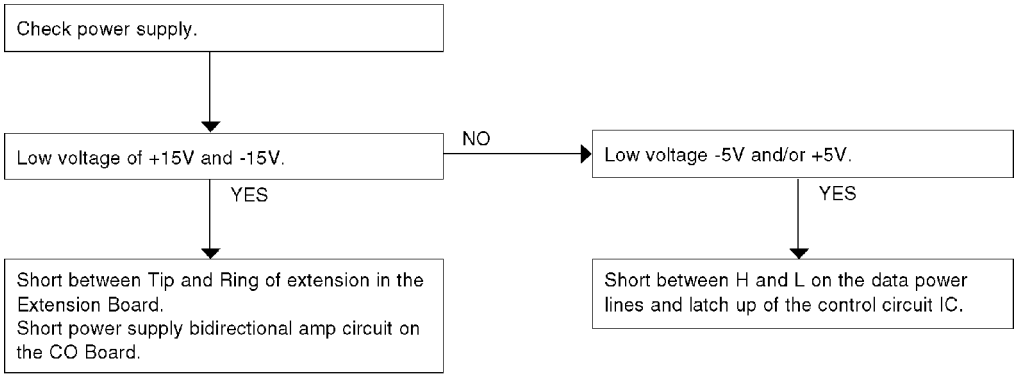
9.5.1. HOLD TONE TO COL


Is the COL call correct ?
NO
Refer to troubleshooting Section 9.8. and 9.9.
YES
Is the external music source connected to the EXT-MUSIC terminal 1 or 2 ?
NO
Connect correctly.
YES
Is the System Programming of Music Source set correctly ? (Program No.803)
NO
Set the System Programming (No.803) correctly.
YES
Does an output signal appear at pin 7 of IC12 (MUSIC1) or IC27 (MUSIC2) ?
NO
Defective AGC circuit consists of IC12, Q11, Q12, D11 and D12 for MUSIC1, IC27, Q13, Q14, D16 and D17 for MUSIC2.
YES
Does an input signal appear at pin 4 of IC8 (MUSIC1) or IC7 (MUSIC2) ?
NO
Defective IC8 or IC7.
YES
Does a 8kHz clock signal appear at pins 10 and 14 of IC8 (MUSIC1) or IC7 (MUSIC2) ?
NO
Open CP27 line (MUSIC1) or CP31 line (MUSIC2).
YES
Does a 2.048MHz clock signal appear at pins 12 and 13 of IC8 (MUSIC1) or IC7 (MUSIC2) ?
NO
Open C2M line.
YES
Is the voltage at pin 7 of IC7 (MUSIC1) or IC8 (MUSIC2) at a high logic level ?
NO
Open PDPG0 line (MUSIC1) or PDPG1 line (MUSIC2).
YES
Defective IC8 (MUSIC1) or IC7 (MUSIC2).

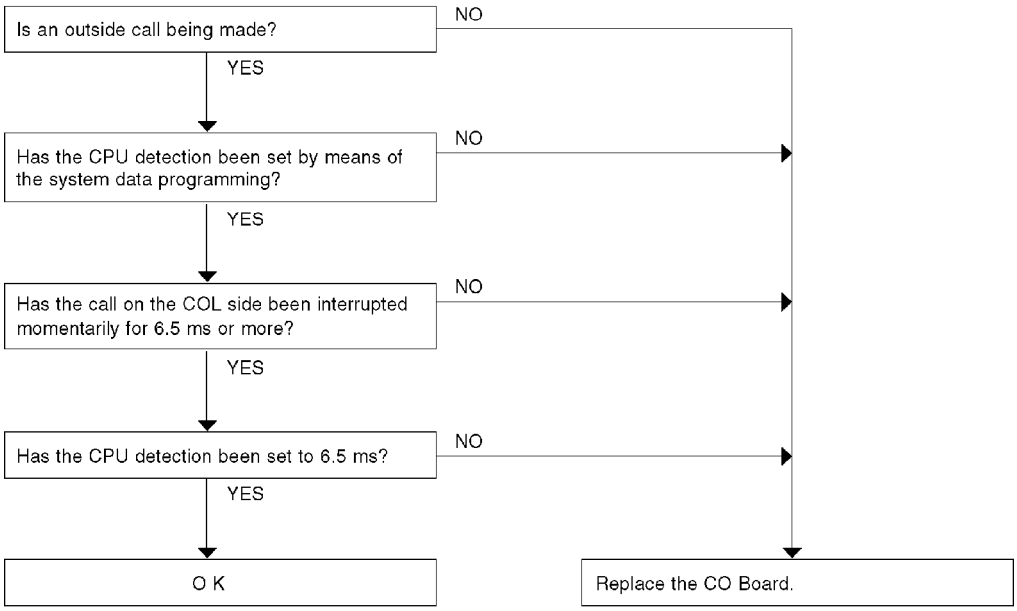
9.5.2. BGM (BACK GROUND MUSIC)


The AHS proprietary telephone.
Is a dial tone heard when an extension goes off-hook ?
NO
Refer to troubleshooting section 9.2.
YES
Refer to troubleshooting section 9.5.1.

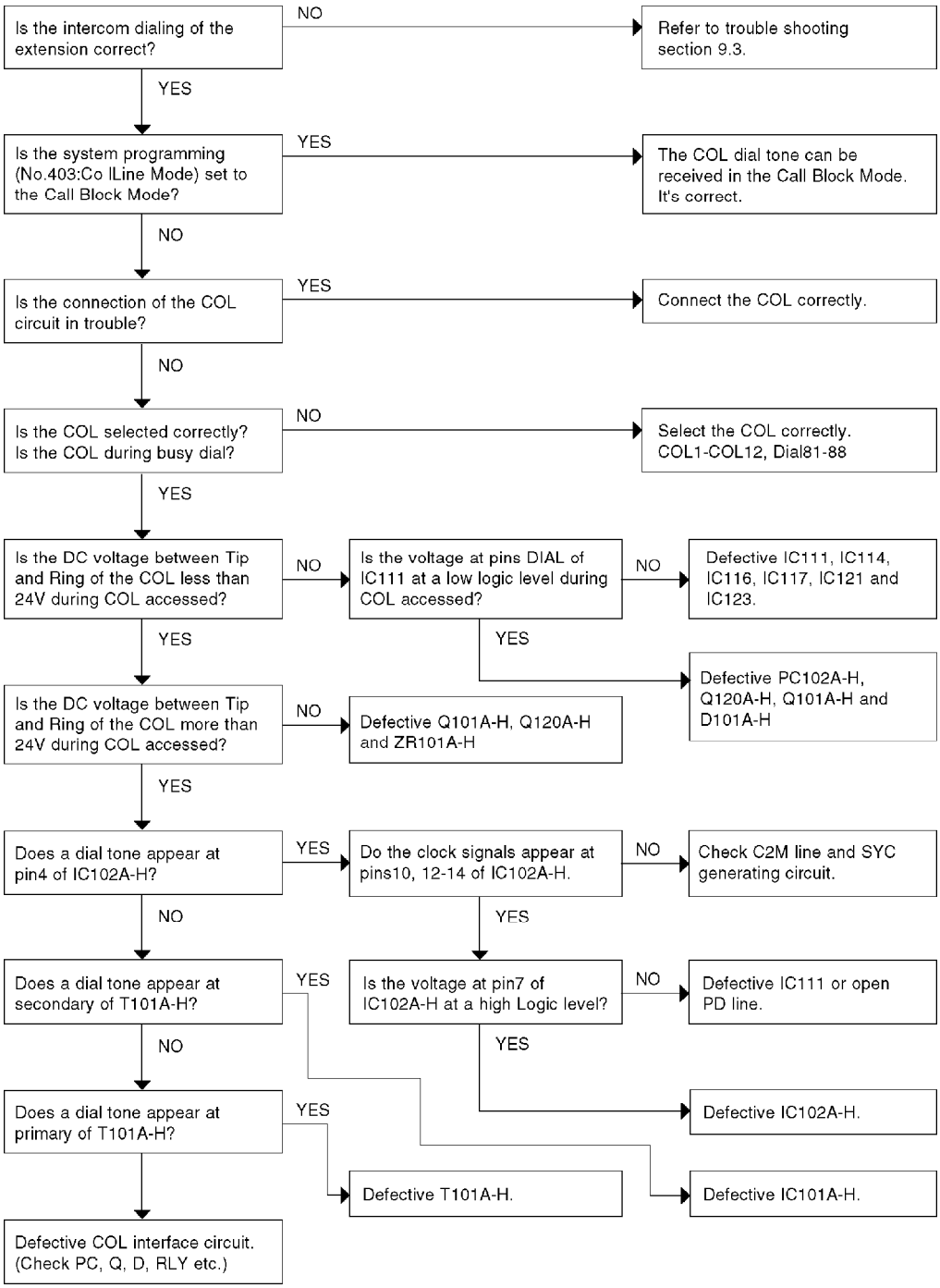
9.6. TOO MUCH NOISE LEVEL WITH INTERCOM (HUM) (CHECK POWER, EXTENSION AND CO BOARD)


Check power supply.
Low voltage of +15V and -15V.
NO
Low voltage -5V and/or +5V.
YES
YES
Short between Tip and Ring of extension in the Extension Board.
Short power supply bidirectional amp circuit on the CO Board.
Short between H and L on the data power lines and latch up of the control circuit IC.

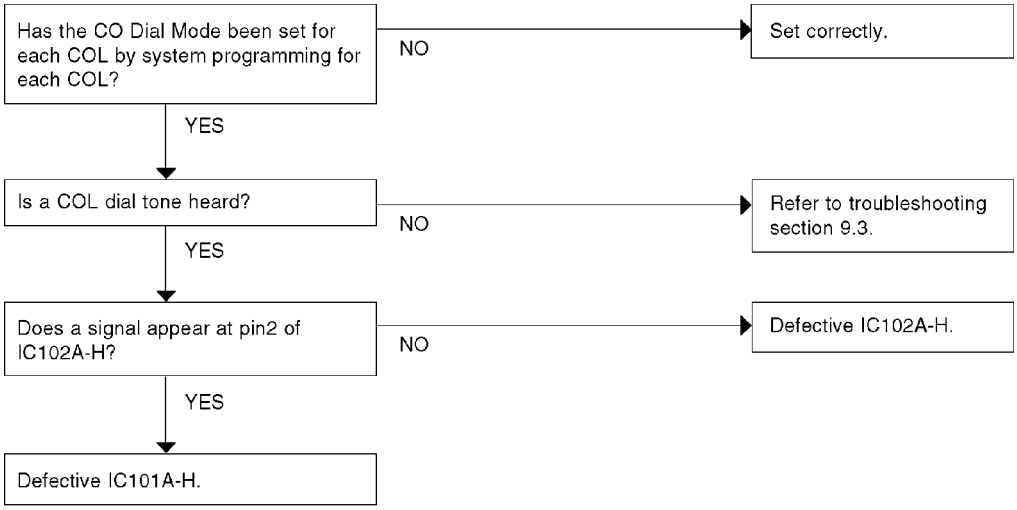
9.7. CO LINE'S RELEASED DURING A CALL (CHECK CO BOARD)


Is an outside call being made?
NO
YES
Has the CPU detection been set by means of the system data programming?
NO
YES
Has the call on the COL side been interrupted momentarily for 6.5 ms or more?
NO
YES
Has the CPU detection been set to 6.5 ms?
NO
YES
O K
Replace the CO Board.

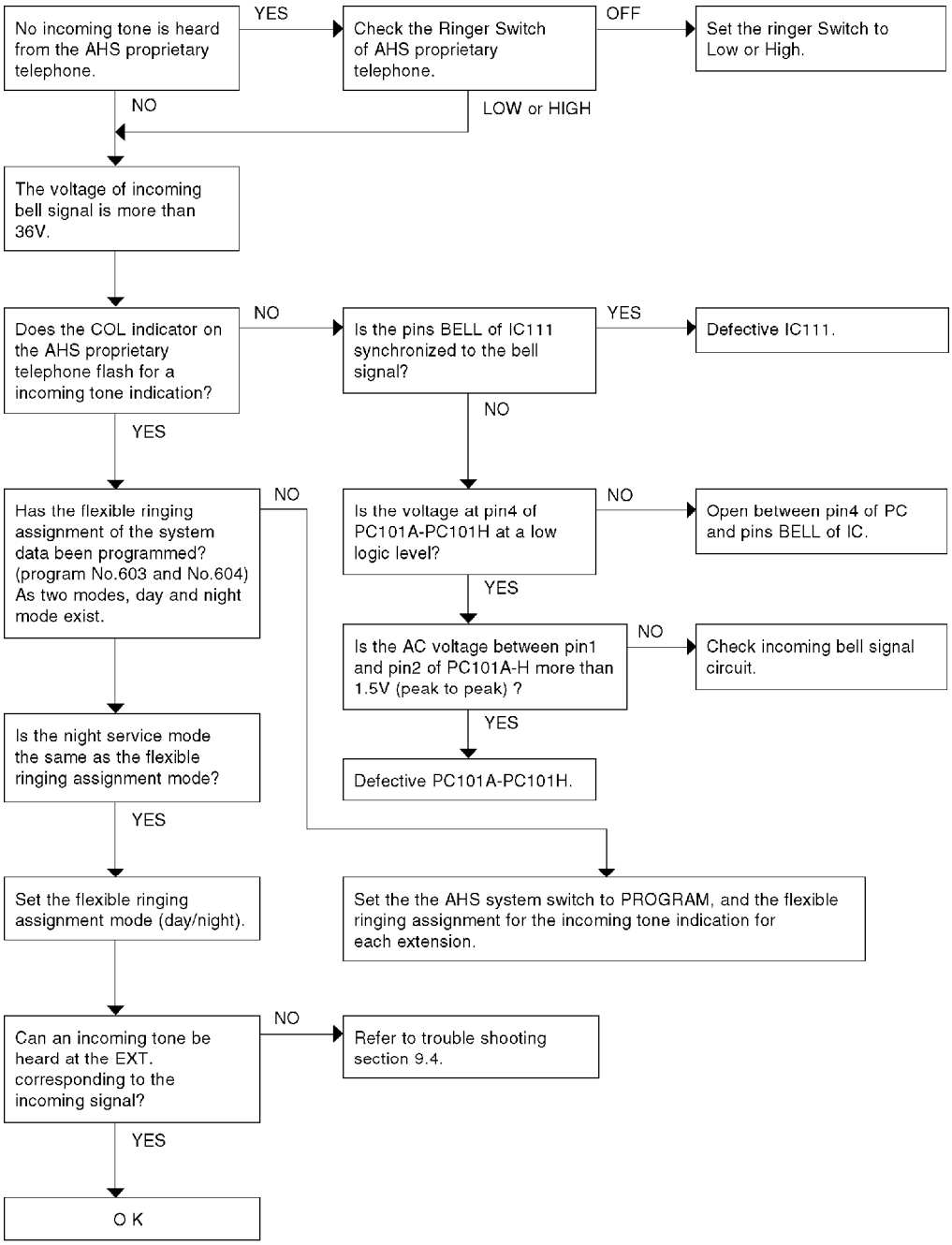
9.8. CAN NOT RECEIVE COL DIAL TONE (CHECK CO BOARD)


Is the intercom dialing of the extension correct?
NO
Refer to trouble shooting section 9.3.
YES
Is the system programming (No.403:Co ILine Mode) set to the Call Block Mode?
YES
The COL dial tone can be received in the Call Block Mode. It's correct.
NO
Is the connection of the COL circuit in trouble?
YES
Connect the COL correctly.
NO
Is the COL selected correctly? Is the COL during busy dial?
NO
Select the COL correctly. COL1-COL12, Dial81-88
YES
Is the DC voltage between Tip and Ring of the COL less than 24V during COL accessed?
NO
Is the voltage at pins DIAL of IC111 at a low logic level during COL accessed?
NO
Defective IC111, IC114, IC116, IC117, IC121 and IC123.
YES
YES
Defective PC102A-H, Q120A-H, Q101A-H and D101A-H
Is the DC voltage between Tip and Ring of the COL more than 24V during COL accessed?
NO
Defective Q101A-H, Q120A-H and ZR101A-H
YES
Does a dial tone appear at pin4 of IC102A-H?
YES
Do the clock signals appear at pins10, 12-14 of IC102A-H.
NO
Check C2M line and SYC generating circuit.
NO
YES
Does a dial tone appear at secondary of T101A-H?
YES
Is the voltage at pin7 of IC102A-H at a high Logic level?
NO
Defective IC111 or open PD line.
NO
YES
Does a dial tone appear at primary of T101A-H?
YES
Defective IC102A-H.
Defective T101A-H.
Defective IC101A-H.
Defective COL interface circuit. (Check PC, Q, D, RLY etc.)

9.9. CAN NOT SEND DTMF TONES (CHECK CO BOARD) (WHEN PULSE/TONE CONVERSION, SPEED DIAL, ONE TOUCH DIAL, REDIAL)

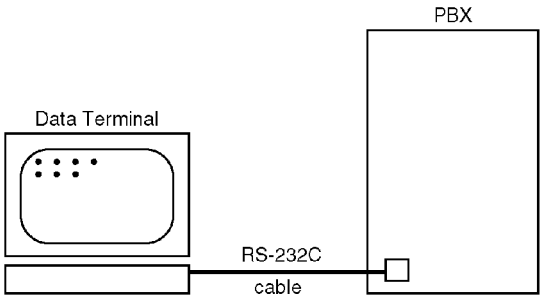


9.10. EXTENSION IS NOT RINGING WHILE BEING CALLED FROM A CO LINE (CHECK CO BOARD)


No incoming tone is heard from the AHS proprietary telephone.
YES
Check the Ringer Switch of AHS proprietary telephone.
OFF
Set the ringer Switch to Low or High.
NO
LOW or HIGH
The voltage of incoming bell signal is more than 36V.
Does the COL indicator on the AHS proprietary telephone flash for a incoming tone indication?
NO
Is the pins BELL of IC111 synchronized to the bell signal?
YES
Defective IC111.
YES
NO
Has the flexible ringing assignment of the system data been programmed? (program No.603 and No.604) As two modes, day and night mode exist.
NO
Is the voltage at pin4 of PC101A-PC101H at a low logic level?
NO
Open between pin4 of PC and pins BELL of IC.
YES
Is the AC voltage between pin1 and pin2 of PC101A-H more than 1.5V (peak to peak) ?
NO
Check incoming bell signal circuit.
YES
Defective PC101A-PC101H.
Is the night service mode the same as the flexible ringing assignment mode?
YES
Set the flexible ringing assignment mode (day/night).
Set the the AHS system switch to PROGRAM, and the flexible ringing assignment for the incoming tone indication for each extension.
Can an incoming tone be heard at the EXT. corresponding to the incoming signal?
NO
Refer to trouble shooting section 9.4.
YES
O K

10. DIAGNOSTIC METHOD

10.1. HOW TO GET INTO SELF-DIAGNOSTIC MODE



(1) Set the main power switch to ON. (PBX and Data Terminal)
(2) Connect the Data Terminal to the RS-232C of PBX and press the return key of the Data Terminal in 10 seconds.
(3) After message is displayed, enter password "? ? ? ?" and press the return key.

Ex.)

```
Welcome to KX-TA1232 Ver. 2.0 Panasonic CO.,LTD
Enter Password
? ? ? ? ↓
```

(4) After response message is received, enter diagnostic mode shift command "DAG".

Ex.)

```
EIA Mode Start
DAG ↓
```

(5) After response message is received, diagnostic command can be used.

Ex.)

```
DIAG Mode Start
```

*Setting of RS-232C communication parameter

Return Code:	CL+LF
Baud Rate:	9600bps
Data:	8 bit
Parity Bit:	none
Stop Bit:	1 bit

10.2. TEST ITEMS

No.	Test Items	Test Method	Check Items
1	DTMF G/R Test	1) Enter "M1 1" from the data terminal. 2) Enter "M1 2" from the data terminal.	1) Make sure response is 2) Make sure response is
2	Extension Board Test [Digital Channel Loop Back]	1) Enter "M3 1" from the data terminal. 2) Enter "M3 2" from the data terminal.	1) Make sure response is 0000". 2) Make sure response is 0000".
3	Extension Board Test [Digital Data Loop Back]	1) Enter "M4 1" from the data terminal. 2) Enter "M4 2" from the data terminal.	1) Make sure response is 2) Make sure response is
4	CO Board Test [Analog Channel Loop Back]	1) Enter "M5 0" from the data terminal.	1) Make sure response is
5	Doorphone Board Test	1) Enter "M9" from the data terminal.	1) Make sure response is
6	Conference Trunk Test	1) Enter "MC" from the data terminal.	1) Make sure response is

11. HOW TO REPLACE THE FLAT PACKAGE IC

If you do not have the special tools (for example: SPOT HEATER) to remove the SPOT HEATER'S Flat IC, if you have solder (large amount) a soldering iron and a cutter knife, you can easily remove IC's even though large than 100 pin.

11.1. PREPARATION

- SOLDER

Sparkle Solder 115A-1, 115B-1 or Almit Solder KR-19, KR-19RMA

- Soldering iron

Recommended power consumption is between 30 W to 40 W.
Temperature of Copper Rod 662 ± 50°F (350 ± 10°C)
(An expert may handle a 60~80 W iron, but beginner might damage foil by overheating.)

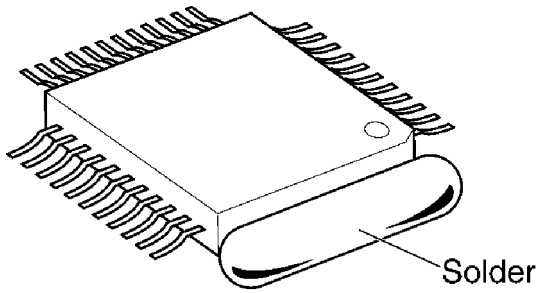
- Flux

HI115 Specific gravity 0.863
(Original flux should be replaced daily.)

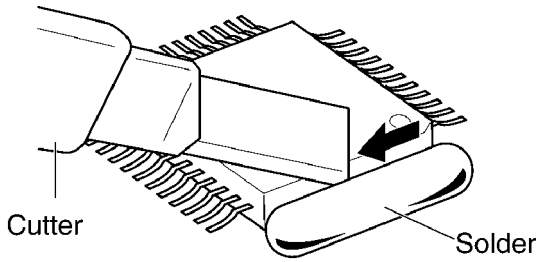
11.2. FLAT PACKAGE IC REMOVE PROCEDURE

1. When all of the IC lead can not been seen at the standard degree, fill with large quantities of solder.

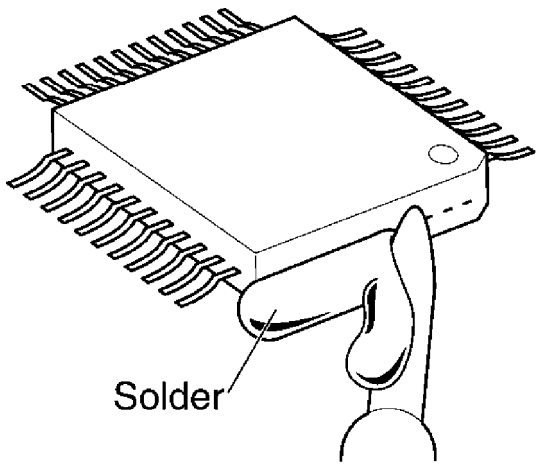
Note:
If you do not fill with solder and directly cut the IC lead with the cutter, stress may build up directly in the P.C.board's pattern. If you do not fill with large quantities of solder as in step 1 the P.C.board pattern may be removed.



2. Using a cutter, cut the lead at the source. (Cut the contents with the cutter lightly 5 or 6 times.)



3. Remove when the solder melts. (Remove the lead at the same time.)



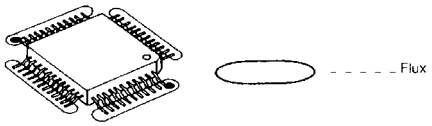
After removing the Flat IC and when attaching the new IC, remove any of the excess solder on the land using the soldering wire, etc. If the excess solder is not removed from the land, the IC will slip and not be attached properly.

11.3. FLAT PACKAGE IC INSTALLATION PROCEDURE

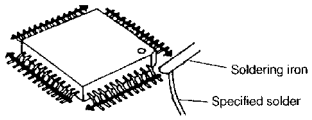
1. **Temporary fix FLAT PACKAGE IC by soldering on two marked pins.**

***Check the accuracy of the IC setting with the corresponding soldering foil.**

2. **Apply flux for all pins of FLAT PACKAGE IC.**

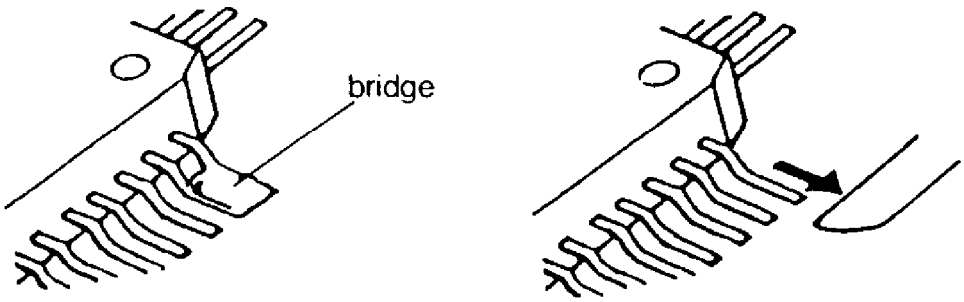


3. **Solder using the specified solder, in the direction of the arrow, by sliding the soldering iron.**



11.4. BRIDGE MODIFICATION PROCEDURE

1. **Lightly re-solder the bridged portion.**
2. **Remove the remaining solder along pins using a soldering iron as shown in the figure below.**



12. EXPLANATION OF CONNECTORS

CN402

Pin	Signal Name	I/O	ACT (H/L)
1	FHNR	I	L
2	HALTN	O	L
3	INTMN	I	L
4	RXD	I	H/L
5	TXD	O	H/L
6	ECK	O	H
7	IRWN	O	H/L
8	SRSTN	O	L
9	IOWN	O	L
10	IORN	O	L
11	IOCSN	O	L
12	CHS4	O	H/L
13	CHS3	O	H/L
14	CHS2	O	H/L
15	CHS1	O	H/L
16	CHS0	O	H/L
17	GND	---	---
18	GND	---	---
19	MCLK	I	H/L
20	CPUCKN	O	H/L
21	C4M	O	H/L
22	C2MN	O	H/L
23	---	---	Not Used
24	GND	---	---
25	A12N	O	H/L
26	A11N	O	H/L
27	A10N	O	H/L
28	A9N	O	H/L
29	A6N	O	H/L
30	A5N	O	H/L
31	A4N	O	H/L
32	A3N	O	H/L
33	A2N	O	H/L
34	A1N	O	H/L
35	D7N	B	H/L
36	D6N	B	H/L
37	D5N	B	H/L
38	D4N	B	H/L
39	D3N	B	H/L
40	D2N	B	H/L

Pin	Signal Name	I/O	ACT (H/L)
41	D1N	B	H/L
42	D0N	B	H/L
43	HWR7	I	H/L
44	HWS7	O	H/L
45	HWR6	I	H/L
46	HWS6	O	H/L
47	HWR5	I	H/L
48	HWS5	O	H/L
49	HWR4	I	H/L
50	HWS4	O	H/L
51	HWR3	I	H/L
52	HWS3	O	H/L
53	HWR2	I	H/L
54	HWS2	O	H/L
55	HWR1	I	H/L
56	HWS1	O	H/L
57	GND	---	---
58	OHCAR	---	---
59	5	---	---
60	OHCAT	---	---
61	-15	---	---
62	GND	---	---
63	15	---	---
64	BELLS	O	---

CN401

Pin	Signal Name	I/O	ACT (H/L)
1	+15V	---	---
2	-15V	---	---
3	+5V	---	---
4	GND	---	---
5	GND	---	---
6	BELLS	---	---
7	BELL	---	---

CN9

Pin	Signal Name	I/O	ACT (H/L)
1	C2M	O	H/L
2	MU/A	O	H/L
3	HWS0	O	H/L
4	HWR0	I	H/L
5	CP29	O	H
6	CP30	O	H
7	D0	B	H/L
8	D1	B	H/L
9	D2	B	H/L
10	D3	B	H/L
11	D4	B	H/L
12	D5	B	H/L
13	GND	---	---
14	PIGN	O	L
15	POGN	O	L
16	+15V	---	---
17	-15V	---	---
18	5	---	---
19	-5	---	---
20	FG	---	---

CN11

Pin	Signal Name	I/O	ACT (H/L)
1	SD	O	12
2	RD	I	12
3	ER	O	12
4	DR	I	12
5	SG	---	---
6	FG	---	---

CN4

Pin	Signal Name	I/O	ACT (H/L)
1	LED1	---	---
2	LED2	O	L

CN409

Pin	Signal Name	I/O	ACT (H/L)
1	GND	---	---
2	GND	---	---
3	GND	---	---
4	GND	---	---
5	HALTN	I	L
6	SRSTN	I	L
7	IOWN	I	L
8	IORN	I	L
9	IOCSN	I	L
10	CHS4	I	H/L
11	CHS3	I	H/L
12	CHS2	I	H/L
13	CHS1	I	H/L
14	CHS0	I	H/L
15	GND	---	---
16	GND	---	---
17	CPUCKN	I	H/L
18	C4M	I	H/L
19	C2MN	I	H/L
20	GND	---	---
21	---	---	Not Used
22	---	---	Not Used
23	A12N	I	H/L
24	A11N	I	H/L
25	A10N	I	H/L
26	A9N	I	H/L
27	A6N	I	H/L
28	A5N	I	H/L
29	A4N	I	H/L
30	A3N	I	H/L
31	A2N	I	H/L
32	A1N	I	H/L
33	D7N	B	H/L
34	D6N	B	H/L
35	D5N	B	H/L
36	D4N	B	H/L
37	D3N	B	H/L
38	D2N	B	H/L
39	D1N	B	H/L
40	D0N	B	H/L

Pin	Signal Name	I/O	ACT (H/L)
41	HWR6	O	H/L
42	HWS6	I	H/L
43	GND	---	---
44	GND	---	---
45	+5V	---	---
46	+5V	---	---
47	-15V	---	---
48	-15V	---	---
49	+15V	---	---
50	+15V	---	---

CN405

Pin	Signal Name	I/O	ACT (H/L)
1	+15V	---	---
2	-15V	---	---
3	+5V	---	---
4	GND	---	---
5	IOCSN	I	L
6	SRSTN	I	L
7	CHS4	I	H/L
8	CHS3	I	H/L
9	CHS2	I	H/L
10	CHS1	I	H/L
11	CHS0	I	H/L
12	IOWN	I	L
13	IORN	I	L
14	C2MN	I	H/L
15	GND	---	---
16	A12N	I	H/L
17	A11N	I	H/L
18	A10N	I	H/L
19	A9N	I	H/L
20	A6N	I	H/L
21	A5N	I	H/L
22	A4N	I	H/L
23	A3N	I	H/L
24	A2N	I	H/L
25	A1N	I	H/L
26	D7N	B	H/L
27	D6N	B	H/L

Pin	Signal Name	I/O	ACT (H/L)
28	D5N	B	H/L
29	D4N	B	H/L
30	D3N	B	H/L
31	D2N	B	H/L
32	D1N	B	H/L
33	D0N	B	H/L
34	HWR1	O	H/L
35	HWS1	I	H/L
36	GND	---	---
37	GND	---	---
38	---	---	---
39	GND	---	---
40	---	---	---
41	GND	---	---
42	---	---	---
43	GND	---	---
44	---	---	---
45	RING	---	---
46	---	---	---
47	TIP	---	---
48	---	---	---
49	---	---	---
50	---	---	---

CN406/407/408

Pin	Signal Name	I/O	ACT (H/L)
1	GND	---	---
2	GND	---	---
3	FHNR	O	L
4	HALTN	I	L
5	ECK	I	H
6	IRWN	I	L
7	SRSTN	I	L
8	IOWN	I	L
9	IORN	I	L
10	IOCSN	I	L
11	CHS4	I	H/L
12	CHS3	I	H/L
13	CHS2	I	H/L
14	CHS1	I	H/L
15	CHS0	I	H/L
16	GND	---	---
17	MCLK	O	H/L
18	CPUCKN	I	H/L
19	C4M	I	H/L
20	C2MN	I	H/L
21	GND	---	---
22	GND	---	---
23	A12N	I	H/L
24	A11N	I	H/L
25	A10N	I	H/L
26	A9N	I	H/L
27	A6N	I	H/L
28	A5N	I	H/L
29	A4N	I	H/L
30	A3N	I	H/L

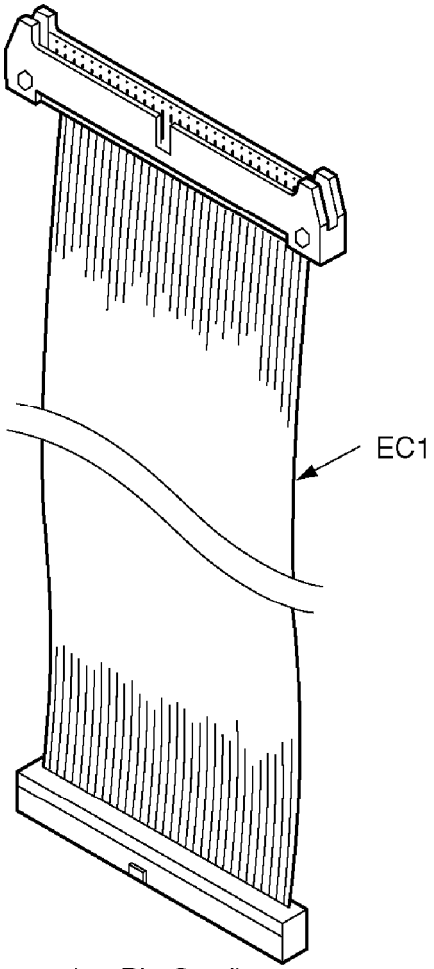
Pin	Signal Name	I/O	ACT (H/L)
31	A2N	I	H/L
32	A1N	I	H/L
33	D7N	B	H/L
34	D6N	B	H/L
35	D5N	B	H/L
36	D4N	B	H/L
37	D3N	B	H/L
38	D2N	B	H/L
39	D1N	B	H/L
40	D0N	B	H/L
41	HWR6	O	H/L
42	HWS6	I	H/L
43	HWR5	O	H/L
44	HWS5	I	H/L
45	HWR4	O	H/L
46	HWS4	I	H/L
47	TIP	---	---
48	RING	---	---
49	---	---	Not Used
50	GND	---	---
51	GND	---	---
52	CA0	I	H/L
53	CA1	I	H/L
54	OHCAR	---	---
55	+5V	---	---
56	OHCAT	---	---
57	-15V	---	---
58	GND	---	---
59	+15V	---	---
60	BELL	I	---

CN403/404

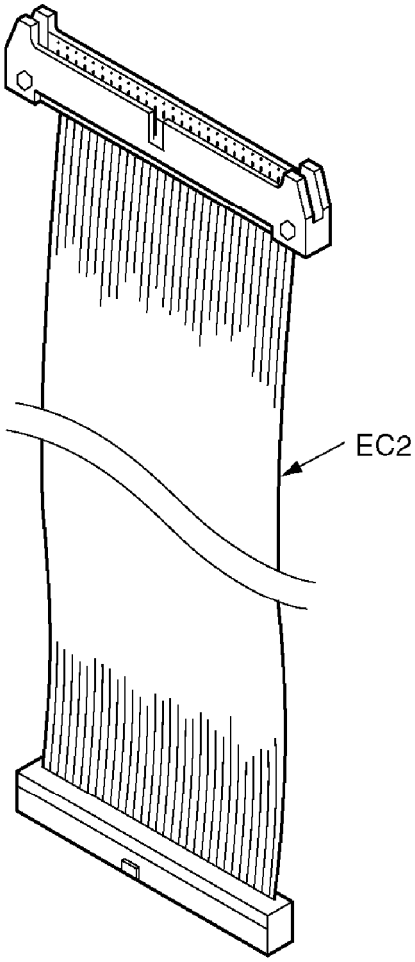
Pin	Signal Name	I/O	ACT (H/L)
1	ECK	I	H
2	IRWN	I	L
3	SRSTN	I	L
4	IOWN	I	L
5	IORN	I	L
6	IOCSN	I	L
7	CHS4	I	H/L
8	CHS3	I	H/L
9	CHS2	I	H/L
10	CHS1	I	H/L
11	CHS0	I	H/L
12	CPUCKN	I	H/L
13	C4M	I	H/L
14	C2MN	I	H/L
15	GND	---	---
16	GND	---	---
17	A12N	I	H/L
18	A11N	I	H/L
19	A10N	I	H/L
20	A9N	I	H/L
21	A6N	I	H/L
22	A5N	I	H/L
23	A4N	I	H/L
24	A3N	I	H/L
25	A2N	I	H/L

Pin	Signal Name	I/O	ACT (H/L)
26	A1N	I	H/L
27	D7N	B	H/L
28	D6N	B	H/L
29	D5N	B	H/L
30	D4N	B	H/L
31	D3N	B	H/L
32	D2N	B	H/L
33	D1N	B	H/L
34	D0N	B	H/L
35	HWR2/HWR3	O	H/L
36	HWS2/HWS3	I	H/L
37	RING	---	---
38	TIP	---	---
39	---	---	---
40	---	---	---
41	---	---	---
42	---	---	---
43	CA0	I	H/L
44	OHCAR	---	---
45	+5V	---	---
46	OHCAT	---	---
47	-15V	---	---
48	GND	---	---
49	+15V	---	---
50	BELL	---	---

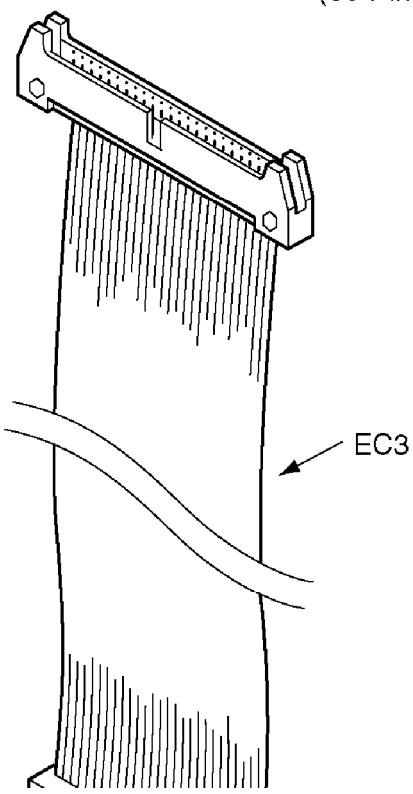
13. EXTENSION CABLE FOR SERVICING (KX-TA1232)

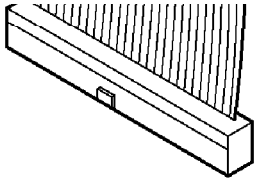


(64 Pin Cord)



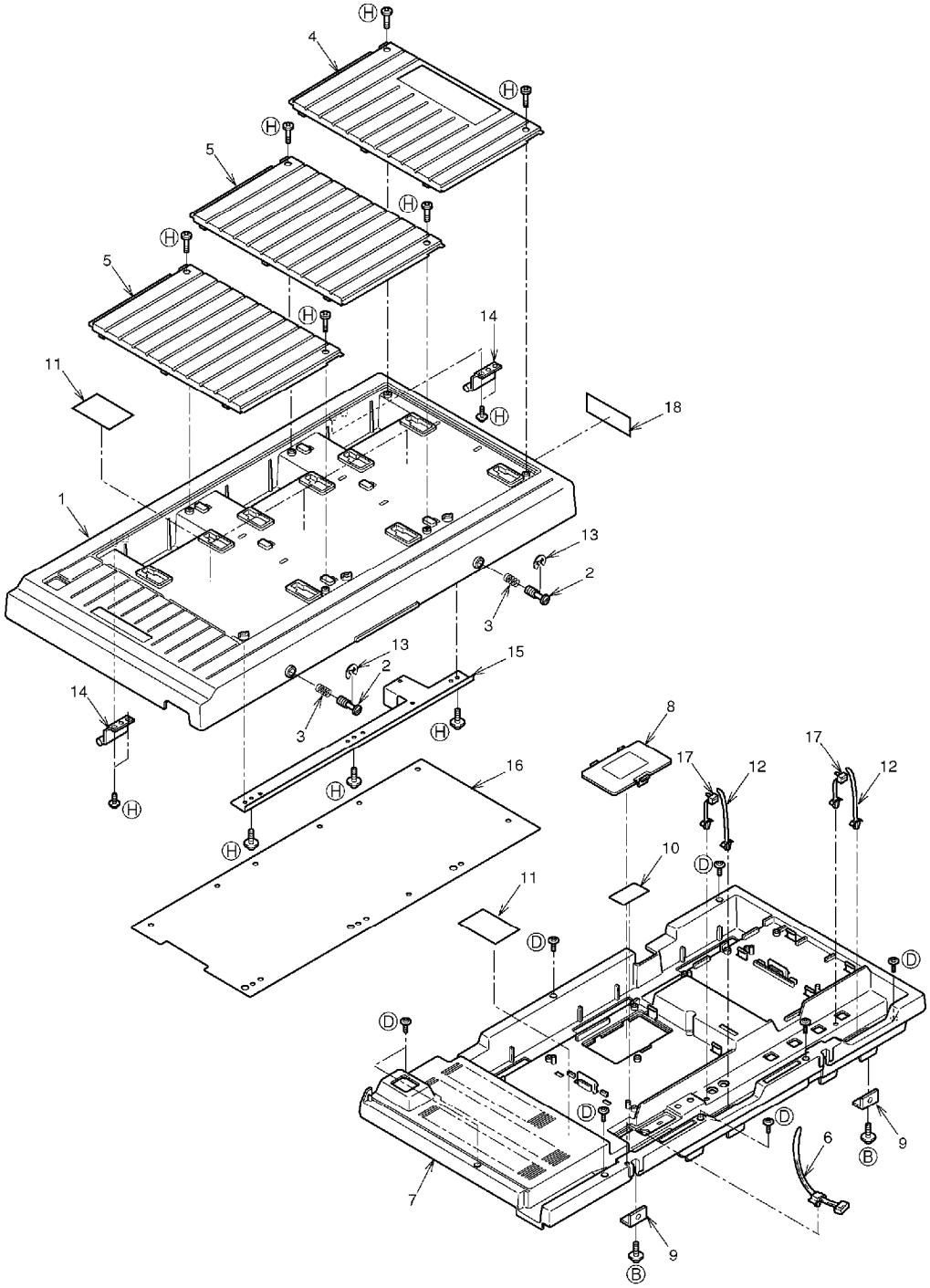
(60 Pin Cord)





(50 Pin Cord)

14. CABINET AND ELECTRICAL PARTS LOCATION (KX-TA1232)


Ⓗ
4
5
5
14
11
18
1
13
2
3
13
2
3
15
14
Ⓗ
16
8
17
12
17
12
10
Ⓓ
11
Ⓓ
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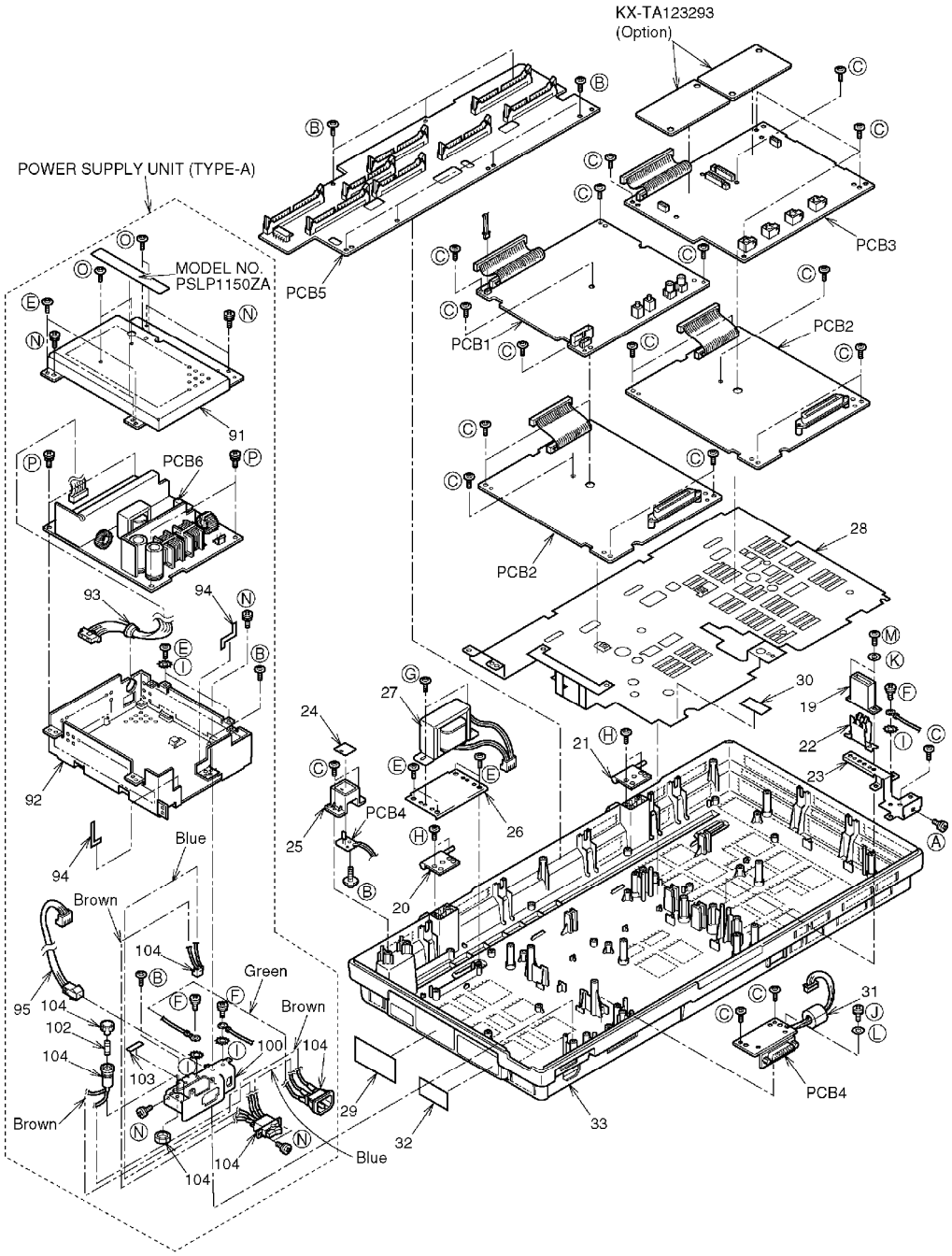
Ⓓ
6
9
Ⓑ
7
9
Ⓑ


KX-TA123293
(Option)
POWER SUPPLY UNIT (TYPE-A)
MODEL NO.
PSLP1150ZA
PCB5
PCB3
PCB1
PCB2
PCB6
PCB4
91
92
93
94
95
Blue
Brown
Green
100
102
103
104
19
20
21
22
23
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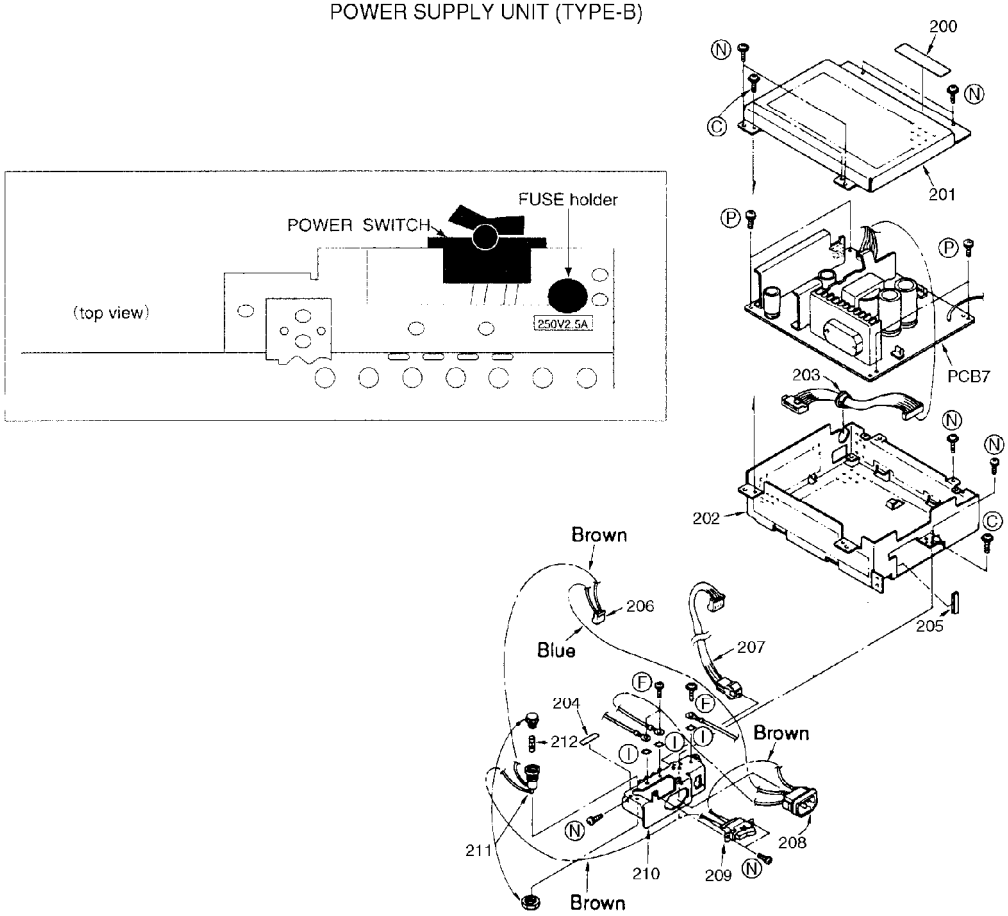
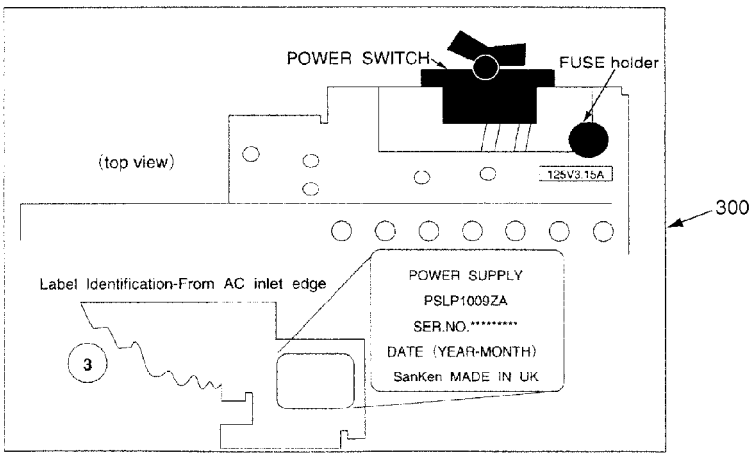
33

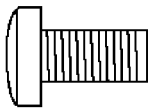
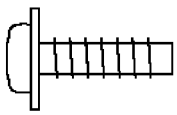
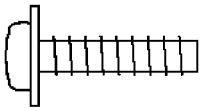
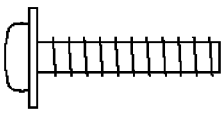
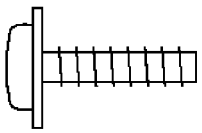
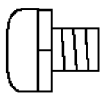
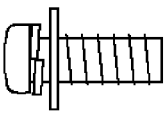
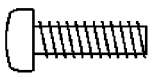
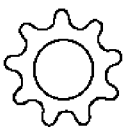
POWER SUPPLY UNIT (TYPE-B)

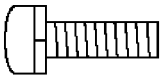
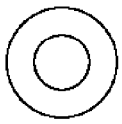
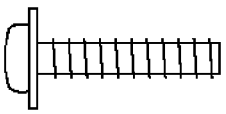
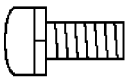
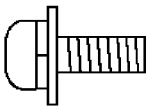
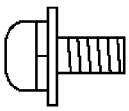


POWER SUPPLY UNIT (TYPE-C)

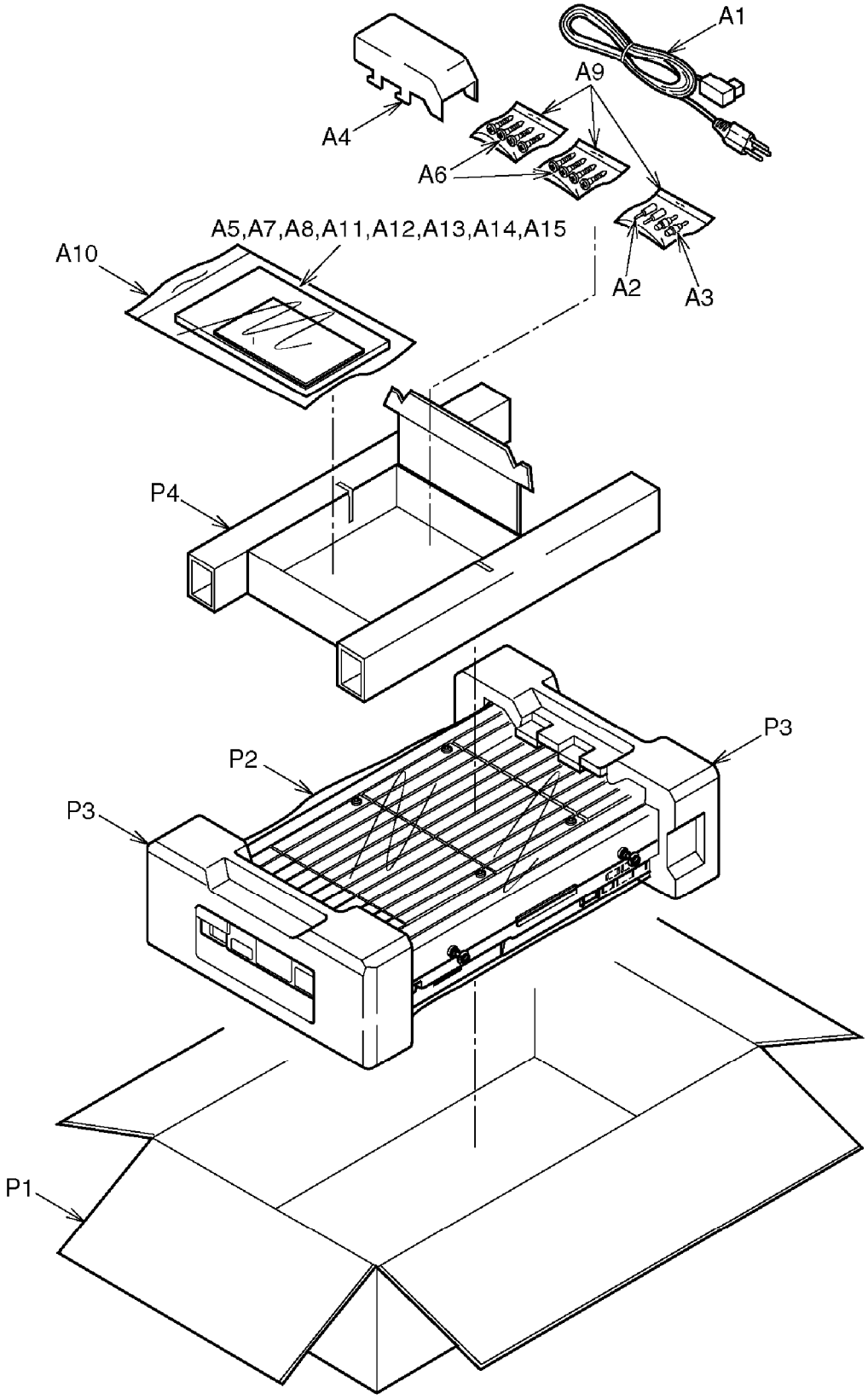


14.1. ACTUAL SIZE OF SCREWS AND WASHER

Ref. No.	Part No.	Figure
Ⓐ	XSN4D8FN	
Ⓑ	XTW3+S10P	
Ⓒ	XTW3+S12P	
Ⓓ	XTW3+S14P	
Ⓔ	XTW4+12S	
Ⓕ	XYN4+C8	
Ⓖ	XYN4+F8	
Ⓗ	XTB3+10GFN	
Ⓘ	XWC4B	

Ⓙ	XYN3+C10	
Ⓚ	XWG35FY	
Ⓛ	PQNW500T	
Ⓜ	XTW3+CS14P	
Ⓝ	XYN3+C6	
Ⓞ	XYN3+F8	
Ⓟ	XYN3+F6	

15. ACCESSORIES AND PACKING MATERIALS (KX-TA1232)



16. REPLACEMENT PARTS LIST (KX-TA1232)

Note:

1. **RTL (Retention Time Limited)**
   The marking (RTL) indicates that the Retention Time is limited for this item.
   After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability depends on the type of assembly and the laws governing parts and product retention. At the end of this period, the assembly will no longer be available.
2. **Important safety notice**
   Components identified by the ⚠ mark indicates special characteristics important for safety. When replacing any of these components, only use specified manufacture's parts.
3. **The S mark indicates service standard parts and may differ from production parts.**
4. **RESISTORS & CAPACITORS**
   Unless otherwise specified;
   All resistors are in ohms (Ω), k=1000 Ω , M=1000k Ω
   All capacitors are in MICRO FARADS (μ F), p= μ (μ F)
   ***Type & Wattage of Resistor**

Type

ERC:Solid ERD:Carbon PQ4R:Chip	ERX:Metal Film ERG:Metal Oxide ERO:Metal Film	PQRD:Carbon PQRQ:Fuse ERF:Wire Wound

Wattage

10,16,18:1/8W	14,25,S2:1/4W	12,50,S1:1/2W	1:1W	2:2W	5:5W

ECFD:Semi-Conductor ECQS:Styrol PQCBX,ECUV:Chip ECMS:Mica	ECCD,ECKD,PQCBC,PQVP : Ceramic ECQM,ECQV,ECQE,ECQU,ECQB : Polyester ECEA,ECSZ,ECOS : Electrolytic ECQP : Polypropylene

Voltage

ECQ Type	ECQG ECQV Type	ECSZ Type	Others	
1H : 50V 2A : 100V 2E : 250V 2H : 500V	05 : 50V 1 : 100V 2 : 200V	OF : 3.15V 1A : 10V 1V : 35V OJ : 6.3V	OJ : 6.3V 1A : 10V 1C : 16V 1E,25 : 25V	1V : 35V 50,1H : 50V 1J : 63V 2A : 100V

16.1. CABINET AND ELECTRICAL PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
1	PQKE10002Z1	COVER	
2	PQHD10011Z	SCREW	
3	PQUS141Z	COIL SPRING	
4	PQKV10006L1	COVER	
5	PQKV10005Z1	COVER	
6	PQHR10031Y	CLAMPER	
7	PQKF10018K1	CABINET	
8	PQKK10018Y1	LID	
9	PQMH10008Z	ANGLE	
10	PQQT10125Z	LABEL	
11	PQQT10918Z	LABEL	
12	PQHR10029Z	CLAMPER	
13	XUC3VW	RETAINING RING	
14	PQMH10009Z	HINGE	
15	PQMC10010Z	ANGLE	
16	PQMC10064Y	MAGNETIC SHIELD	
17	PQHR10028Z	CLAMPER	
18	PSQT1769Z	LABEL	
19	PQHR10032Z	COVER	
20	PQMH10010Y	HINGE	
21	PQMH10010Z	HINGE	
22	PQMH10007Z	LEAF SPRING	
23	PQMC10009Z	ANGLE	
24	PQGP10009Z1	PANEL	
25	PQGG10009Z1	GRILLE	
26	PQMH10026Z	FRAME	
27	PQLT1U9M1A	TRANSFORMER	
28	PQMC10063Y	MAGNETIC SHIELD	
29	PSGT2161Z	NAME PLATE	
30	PQHR9488Z	PLASTIC PARTS,SHEET	
31	PQLB5D2	INSULATOR,CORE	
32	PSQT1583Z	LABEL	
33	PQKM10021S1	CABINET BODY	

16.2. ACCESSORIES AND PACKING MATERIALS

Ref. No.	Part No.	Part Name & Description	Remarks
A1	PQJA10016Z	POWER CORD	⚠
A2	PQJP1E1Z	PLUG	
A3	PQJP1E2Z	PLUG	
A4	PQHR10113Z1	COVER	
A5	PSQX2424Z	INSTRUCTION BOOK	
A6	PQHE5008Z	MOUNTING BRACKET	
A7	PSQX2423Z	INSTRUCTION BOOK	
A8	PQQX10176X	PRINTED_MATTER	
A9	XZB05X08A03	PROTECTION COVER (FOR ACCESSORIES)	
A10	XZB26X45A04	PROTECTION COVER (FOR MANUALS)	
A11	PSQX2426Z	INSTRUCTION BOOK	
A12	PSQX2425Z	INSTRUCTION BOOK	
A13	PSQX2473Z	INSTRUCTION BOOK	
A14	PSQX2474Z	INSTRUCTION BOOK	
A15	PSQW1725Z	LEAFLET	
P1	PSPK1898Z	PACKING CASE	
P2	PQPP10022Z	PROTECTION COVER (FOR SET)	
P3	PQPN10196Z	CUSHION	
P4	PQPN10460Z	ACCESSORY BOX	

16.3. CPU BOARD PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
PCB1	PSWP1TA1232M	CPU BOARD ASS'Y (RTL)	
		(ICS)	
IC1	PQVI68301FCG	IC	
IC2	PQVI620890F	IC	
IC3	PQVIMT8980DE	IC	S
IC7	PSVIMCL5480S	IC	
IC8	PSVIMCL5480S	IC	
IC12	PQVINJM4558D	IC	S
IC13	PSVIPS600CMT	IC	
IC14	PQVINJM4558D	IC	S
IC15	PQVIHD75188P	IC	S
IC16	PQVIHD75189P	IC	S
IC17	PSVITC7HT00A	IC	
IC18	PQVISN7L00S	IC	
IC19	PSWI2TA1232M	IC (ROM)	
IC20/21	PSWI1TA1232M	IC (ROM KIT)	
IC24	PSVICY62148F	IC	S
IC25	PSVICY62148F	IC	S
IC26	PQVIMS6242BS	IC	
IC27	PQVINJM4558D	IC	S
IC29	PQVISN7L368M	IC	
IC31	PQVISN7L640M	IC	
IC32	PQVISN7L365S	IC	

Ref. No.	Part No.	Part Name & Description	Remarks
IC33	PQVISN7L368M	IC	
IC34	PQVISN7L368M	IC	
IC35	PQVISN7L365S	IC	
IC36	PQVIMB7HU04F	IC	S
IC37	PQVISN7H00S	IC	S
IC38	PQVISN7H74S	IC	
IC39	PQVISN7L151M	IC	
IC40	PQVISN7L32S	IC	
		(TRANSISTORS)	
Q5	PQVTDTA144EK	TRANSISTOR(SI)	
Q6	2SC2412K	TRANSISTOR(SI)	
Q7	2SC2412K	TRANSISTOR(SI)	
Q8	PQVTDTA143E	TRANSISTOR(SI)	
Q9	PQVTDTC144E	TRANSISTOR(SI)	
Q10	2SA933	TRANSISTOR(SI)	S
Q11	2SC2412K	TRANSISTOR(SI)	
Q12	2SC2878	TRANSISTOR(SI)	
Q13	2SC2412K	TRANSISTOR(SI)	
Q14	2SC2878	TRANSISTOR(SI)	
Q605	PQVTDTC144E	TRANSISTOR(SI)	
Q606	2SB1237R	TRANSISTOR(SI)	
Q607	PQVTDTC143E	TRANSISTOR(SI)	
		(DIODES)	
D1	MA4091	DIODE(SI)	
D3	MA723	DIODE(SI)	
D4	PQVDAK03	DIODE(SI)	
D11	RLS71	DIODE(SI)	
D12	RLS71	DIODE(SI)	
D13	MA4030	DIODE(SI)	
D14	MA4030	DIODE(SI)	
D15	MA4056	DIODE(SI)	
D16	RLS71	DIODE(SI)	
D17	RLS71	DIODE(SI)	
D20	MA723	DIODE(SI)	
D21	MA723	DIODE(SI)	
		(CONNECTORS)	
CN1	PQJS64R15Z	CONNECTOR,64P	
CN4	PQJP2D70Z	CONNECTOR,2P	
CN9	PQJP20A08Z	CONNECTOR,20P	
CN12	PQJP6D70Z	CONNECTOR,6P	
		(JACKS)	
JAC1	PQJJ1G1Z	JACK	
JAC2	PQJJ1G1Z	JACK	
JAC3	PQJJ1D3Z	JACK	
JAC4	PQJJ1D3Z	JACK	

Ref. No.	Part No.	Part Name & Description	Remarks
		(CAPACITORS)	
C1	EECFE5R5474	0.47	
C2	ECEA1EU4R7	4.7	
C3	ECEA1HN3R3S	3.3	
C8	ECQV1H104JL	0.1	
C9	ECQV1H104JL	0.1	
C14	ECUV1H680JCV	68p	
C19	ECUV1H101JCV	100p	
C20	ECUV1H332KBV	0.0033	
C22	ECUV1H101JCV	100p	
C23	ECUV1H101JCV	100p	
C24	ECUV1H332KBV	0.0033	
C25	ECUV1C104KBV	0.1	
C26	ECUV1C104KBV	0.1	
C27	ECUV1H102KBV	0.001	S
C28	ECUV1C104KBV	0.1	
C29	ECUV1H101JCV	100p	
C30	ECUV1C104KBV	0.1	
C31	ECUV1H102KBV	0.001	S
C35	ECUV1C104KBV	0.1	
C36	ECUV1C104KBV	0.1	
C37	ECUV1C104KBV	0.1	
C38	ECUV1C104KBV	0.1	
C39	ECUV1H200JCV	20p	
C40	ECUV1H223KBV	0.022	S
C41	ECUV1H223KBV	0.022	S
C44	ECUV1H223KBV	0.022	S
C45	ECUV1H223KBV	0.022	S
C46	ECUV1H223KBV	0.022	S
C47	ECUV1H223KBV	0.022	S
C50	ECEA1AU331	330	
C53	ECUV1H180JCV	18p	
C54	ECUV1H180JCV	18p	
C55	ECUV1H223KBV	0.022	S
C56	ECUV1H223KBV	0.022	S
C59	ECEA1HU010	1	
C60	ECEA1HU010	1	
C61	ECEA1HU010	1	
C62	ECEA1HU010	1	
C63	ECEA1HU010	1	
C64	ECUV1H223KBV	0.022	S
C66	ECEA1AU101	100	
C67	ECUV1H223KBV	0.022	S
C68	ECUV1H223KBV	0.022	S
C70	ECUV1H223KBV	0.022	S
C71	ECUV1H223KBV	0.022	S

Ref. No.	Part No.	Part Name & Description	Remarks
C72	ECUV1H223KBV	0.022	S
C80	ECUV1H200JCV	20p	
C81	ECUV1H223KBV	0.022	S
C82	ECUV1H223KBV	0.022	S
C83	ECUV1H223KBV	0.022	S
C84	ECUV1H223KBV	0.022	S
C85	ECUV1H223KBV	0.022	S
C86	ECUV1C104KBV	0.1	
C87	ECEA1AKS330	33	S
C88	ECEA1HN2R2S	2.2	S
C89	ECUV1C104KBV	0.1	
C90	ECEA1AKS330	33	S
C91	ECEA1HN2R2S	2.2	S
C92	ECUV1H101JCV	100p	
C93	ECUV1H101JCV	100p	
C94	ECUV1H470JCV	47p	
C95	ECUV1H470JCV	47p	
C96	ECUV1H470JCV	47p	
C97	ECUV1H223KBV	0.022	S
C98	ECUV1H223KBV	0.022	S
C99	ECUV1H223KBV	0.022	S
C100	ECUV1H220JCV	22p	
C101	ECUV1H220JCV	22p	
C102	ECUV1H223KBV	0.022	S
C705	ECUV1H223KBV	0.022	S
		(RESISTORS)	
R4	ERJ3GEYJ471	470	
R5	ERJ3GEYJ472	4.7k	
R6	ERJ3GEYJ223	22k	
R7	ERJ3GEYJ103	10k	
R8	ERJ3GEYJ683	68k	
R10	ERJ3GEYJ224	220k	
R11	ERJ3GEYJ681	680	
R12	ERJ3GEYJ393	39k	
R13	ERJ3GEYJ183	18k	
R14	ERJ3GEYJ104	100k	
R15	ERJ3GEYJ103	10k	
R16	ERJ3GEYJ274	270k	
R17	ERJ3GEYJ183	18k	
R18	ERJ3GEYJ103	10k	
R19	ERJ3GEYJ561	560	
R20	ERJ3GEYJ105	1M	
R21	ERJ3GEYJ623	62k	
R30	ERJ3GEYJ224	220k	
R33	ERJ3GEYJ472	4.7k	
R34	ERJ3GEYJ333	33k	

Ref. No.	Part No.	Part Name & Description	Remarks
R35	ERJ3GEYJ104	100k	
R36	ERJ3GEYJ124	120k	
R37	ERJ3GEYJ563	56k	
R38	ERJ3GEYJ104	100k	
R39	ERJ3GEYJ124	120k	
R40	ERJ3GEYJ104	100k	
R48	ERJ3GEYJ333	33k	
R50	ERJ3GEYJ224	220k	
R51	ERJ3GEYJ333	33k	
R52	ERJ3GEYJ472	4.7k	
R53	ERJ3GEYJ104	100k	
R57	ERJ3GEYJ102	1k	
R59	ERJ3GEYJ563	56k	
R61	ERJ3GEYJ103	10k	
R62	ERJ3GEYJ223	22k	
R65	ERJ3GEYJ561	560	
R66	ERJ3GEYJ103	10k	
R67	ERJ3GEYJ103	10k	
R68	ERJ3GEYJ103	10k	
R69	ERJ3GEYJ103	10k	
R70	ERJ3GEYJ103	10k	
R71	ERJ3GEYJ103	10k	
R72	ERJ3GEYJ103	10k	
R73	ERJ3GEYJ103	10k	
R74	ERJ3GEYJ103	10k	
R75	ERJ3GEYJ103	10k	
R76	ERJ3GEYJ103	10k	
R77	ERJ3GEYJ103	10k	
R78	ERJ3GEYJ103	10k	
R79	ERJ3GEYJ103	10k	
R83	PQRD1VJ151	150	
R84	ERJ3GEYJ152	1.5k	
R85	ERJ3GEYJ681	680	
R87	ERJ3GEYJ103	10k	
R91	ERJ3GEYJ103	10k	
R92	ERJ3GEYJ103	10k	
R93	ERJ3GEYJ103	10k	
R94	ERJ3GEYJ103	10k	
R96	ERJ3GEYJ103	10k	
R97	ERJ3GEYJ103	10k	
R110	ERJ3GEYJ470	47	
R111	ERJ3GEYJ470	47	
R112	ERJ3GEYJ470	47	
R113	ERJ3GEYJ103	10k	
R114	ERJ3GEYJ103	10k	
R115	ERJ3GEYJ222	2.2k	
R116	ERJ3GEYJ472	4.7k	

Ref. No.	Part No.	Part Name & Description	Remarks
R117	ERJ3GEYJ103	10k	
R118	ERJ3GEYJ333	33k	
R119	ERJ3GEYJ103	10k	
R120	ERJ3GEYJ334	330k	
R121	ERJ3GEYJ222	2.2k	
R122	ERJ3GEYJ472	4.7k	
R123	ERJ3GEYJ103	10k	
R124	ERJ3GEYJ333	33k	
R125	ERJ3GEYJ103	10k	
R126	ERJ3GEYJ334	330k	
R127	ERJ3GEYJ472	4.7k	
R128	ERJ3GEYJ472	4.7k	
R129	ERJ3GEYJ470	47	
R130	ERJ3GEYJ470	47	
R131	ERJ3GEYJ470	47	
R132	ERJ3GEYJ470	47	
R133	ERJ3GEYJ470	47	
R134	ERJ3GEYJ390	39	
R135	ERJ3GEYJ470	47	
R136	ERJ3GEYJ470	47	
R137	ERJ3GEYJ470	47	
R138	ERJ3GEYJ101	100	
R139	ERJ3GEYJ101	100	
R140	ERJ3GEYJ101	100	
R141	ERJ3GEYJ101	100	
R142	ERJ3GEYJ101	100	
R143	ERJ3GEYJ101	100	
R144	ERJ3GEYJ101	100	
R145	ERJ3GEYJ101	100	
R146	ERJ3GEYJ470	47	
R147	ERJ3GEYJ470	47	
R148	ERJ3GEYJ470	47	
R149	ERJ3GEYJ470	47	
R150	ERJ3GEYJ470	47	
R151	ERJ3GEYJ470	47	
R152	ERJ3GEYJ470	47	
R153	ERJ3GEYJ470	47	
R154	ERJ3GEYJ470	47	
R155	ERJ3GEYJ470	47	
R156	ERJ3GEYJ470	47	
R157	ERJ3GEYJ470	47	
R158	ERJ3GEYJ470	47	
R159	ERJ3GEYJ470	47	
R160	ERJ3GEYJ470	47	
R161	ERJ3GEYJ390	39	
R162	ERJ3GEYJ330	33	
R163	ERJ3GEYJ560	56	
R164	ERJ3GEYJ560	56	
R165	ERJ3GEYJ560	56	

Ref. No.	Part No.	Part Name & Description	Remarks
R166	ERJ3GEYJ560	56	
R167	ERJ3GEYJ560	56	
R168	ERJ3GEYJ560	56	
R169	ERJ3GEYJ560	56	
R170	ERJ3GEYJ560	56	
R171	ERJ3GEYJ560	56	
R172	ERJ3GEYJ560	56	
R173	ERJ3GEYJ560	56	
R174	ERJ3GEYJ560	56	
R175	ERJ3GEYJ560	56	
R176	ERJ3GEYJ560	56	
R177	ERJ3GEYJ560	56	
R178	ERJ3GEYJ560	56	
R179	ERJ3GEYJ560	56	
R180	ERJ3GEYJ560	56	
R181	ERJ3GEYJ560	56	
R182	ERJ3GEYJ560	56	
R183	ERJ3GEYJ560	56	
R184	ERJ3GEYJ560	56	
R185	ERJ3GEYJ560	56	
R186	ERJ3GEYJ560	56	
R187	ERJ3GEYJ560	56	
R188	ERJ3GEYJ560	56	
R189	ERJ3GEYJ560	56	
R190	ERJ3GEYJ560	56	
R191	ERJ3GEYJ560	56	
R192	ERJ3GEYJ560	56	
R193	ERJ3GEYJ560	56	
R194	ERJ3GEYJ560	56	
R195	ERJ3GEYJ560	56	
R196	ERJ3GEYJ560	56	
R197	ERJ3GEYJ560	56	
R198	ERJ3GEYJ560	56	
R199	ERJ3GEYJ560	56	
R200	ERJ3GEYJ560	56	
R202	ERJ3GEYJ102	1k	
R203	ERJ3GEYJ102	1k	
R204	ERJ3GEYJ103	10k	
R205	ERJ3GEYJ103	10k	
R206	ERJ3GEYJ103	10k	
R207	ERJ3GEYJ103	10k	
R208	ERJ3GEYJ103	10k	
R209	ERJ3GEYJ103	10k	
R210	ERJ3GEYJ103	10k	
R211	ERJ3GEYJ103	10k	
R212	ERJ3GEYJ103	10k	
R213	ERJ3GEYJ103	10k	
R214	ERJ3GEYJ103	10k	
R215	ERJ3GEYJ103	10k	

Ref. No.	Part No.	Part Name & Description	Remarks
R216	ERJ3GEYJ103	10k	
R217	ERJ3GEYJ103	10k	
R218	ERJ3GEYJ103	10k	
R219	ERJ3GEYJ103	10k	
R220	ERJ3GEYJ223	22k	
R221	ERJ3GEYJ222	2.2k	
R222	ERJ3GEYJ103	10k	
R223	ERJ3GEYJ223	22k	
R224	ERJ3GEYJ105	1M	
R225	ERJ3GEYJ330	33	
R226	ERJ3GEYJ330	33	
R227	ERJ3GEYJ223	22k	
R228	ERJ3GEYJ103	10k	
R229	ERJ3GEYJ560	56	
R704	ERJ3GEYJ103	10k	
R705	PQRD1VJ220	22	
R706	ERJ3GEYJ000	0	
R707	ERJ3GEYJ561	560	
R709	ERJ3GEYJ472	4.7k	
J1	ERJ3GEYJ000	0	
J16	ERJ3GEYJ223	22k	
		(COILS)	
L7	PQLE106	COIL	S
L8	PQLE106	COIL	S
L9	PQLE106	COIL	S
L10	PQLE106	COIL	S
L11	PQLE106	COIL	S
L12	PQLE106	COIL	S
L13	PQLE106	COIL	S
L14	PQLE106	COIL	S
		(CERAMIC FILTERS)	
L21	PQVFTU50MT	CERAMIC FILTER	
L22	PQVFTU50MT	CERAMIC FILTER	
L23	PQVFTU50MT	CERAMIC FILTER	
L24	PQVFCM04RC01	CERAMIC FILTER	
L25	PQVFCM04RC01	CERAMIC FILTER	
L26	PQVFCM04RC01	CERAMIC FILTER	
L27	PQVFCM04RC01	CERAMIC FILTER	
		(SWITCHES)	
SW1	EVQ21409K	SWITCH	
SW2	PQSS2A24Z	SWITCH	
		(TRANSFORMERS)	
T2	PQLT2D6A	TRANSFORMER	S
T3	PQLT2D6A	TRANSFORMER	S
T4	PQLT2D6A	TRANSFORMER	S
T5	PQLT2D6A	TRANSFORMER	S

Ref. No.	Part No.	Part Name & Description	Remarks
		(CRYSTAL OSCILLATORS)	
X1	PQVCJ12000N8	CRYSTAL OSCILLATOR	
X2	PQVCL3276N6Z	CRYSTAL OSCILLATOR	
X3	PQVCJ8192N8Z	CRYSTAL OSCILLATOR	
		(COMPONENTS PARTS)	
Z1	PQRSLD8X103J	RESISTOR ARRAY	
Z2	PQRSLD8X103J	RESISTOR ARRAY	
Z4	PQRSLD8X103J	RESISTOR ARRAY	
Z5	PQRSLD8X103J	RESISTOR ARRAY	
Z6	PQRSLD8X103J	RESISTOR ARRAY	
		(BATTERY)	
BATT	CR23541GUF	LITHIUM BATTERY	

16.4. EXTENSION BOARD PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
PCB2	PSWP2TA1232M	EXTENSION BOARD ASS'Y (RTL)	
		(ICS)	
IC201A	PSVIMC14548V	IC	S
IC201B	PSVIMC14548V	IC	S
IC201C	PSVIMC14548V	IC	S
IC201D	PSVIMC14548V	IC	S
IC201E	PSVIMC14548V	IC	S
IC201F	PSVIMC14548V	IC	S
IC201G	PSVIMC14548V	IC	S
IC201H	PSVIMC14548V	IC	S
IC203A	PQVINJM319V	IC	
IC203B	PQVINJM319V	IC	
IC203C	PQVINJM319V	IC	
IC203D	PQVINJM319V	IC	
IC203E	PQVINJM319V	IC	
IC203F	PQVINJM319V	IC	
IC203G	PQVINJM319V	IC	
IC203H	PQVINJM319V	IC	
IC211	PQVI603830F	IC	S
IC213	PQVIMT8952BE	IC	S
IC215	PQVICM8870FI	IC	S
IC216	PQVICM8870FI	IC	S
IC217	PQVIMC4051BF	IC	S
IC218	PQVIMC4051BF	IC	S
IC219	PQVISN7L14S	IC	S
IC220	PQVISN7L14S	IC	S
IC221	PQVISN7L14S	IC	S
IC222	PQVISN7L365S	IC	
IC223	PQVISN7L86S	IC	S
IC224	PQVISN7L640M	IC	

Ref. No.	Part No.	Part Name & Description	Remarks
		(TRANSISTORS)	
Q200A	2SA1576R	TRANSISTOR(SI)	
Q200B	2SA1576R	TRANSISTOR(SI)	
Q200C	2SA1576R	TRANSISTOR(SI)	
Q200D	2SA1576R	TRANSISTOR(SI)	
Q200E	2SC4081R	TRANSISTOR(SI)	
Q200F	2SC4081R	TRANSISTOR(SI)	
Q200G	2SC4081R	TRANSISTOR(SI)	
Q200H	2SC4081R	TRANSISTOR(SI)	
Q201A	2SA1576R	TRANSISTOR(SI)	
Q201B	2SA1576R	TRANSISTOR(SI)	
Q201C	2SA1576R	TRANSISTOR(SI)	
Q201D	2SA1576R	TRANSISTOR(SI)	
Q201E	2SA1576R	TRANSISTOR(SI)	
Q201F	2SA1576R	TRANSISTOR(SI)	
Q201G	2SA1576R	TRANSISTOR(SI)	
Q201H	2SA1576R	TRANSISTOR(SI)	
Q203A	2SB1322	TRANSISTOR(SI)	
Q203B	2SB1322	TRANSISTOR(SI)	
Q203C	2SB1322	TRANSISTOR(SI)	
Q203D	2SB1322	TRANSISTOR(SI)	
Q203E	2SB1322	TRANSISTOR(SI)	
Q203F	2SB1322	TRANSISTOR(SI)	
Q203G	2SB1322	TRANSISTOR(SI)	
Q203H	2SB1322	TRANSISTOR(SI)	
Q204A	2SD1994A	TRANSISTOR(SI)	
Q204B	2SD1994A	TRANSISTOR(SI)	
Q204C	2SD1994A	TRANSISTOR(SI)	
Q204D	2SD1994A	TRANSISTOR(SI)	
Q204E	2SD1994A	TRANSISTOR(SI)	
Q204F	2SD1994A	TRANSISTOR(SI)	
Q204G	2SD1994A	TRANSISTOR(SI)	
Q204H	2SD1994A	TRANSISTOR(SI)	
Q205A	2SC4081R	TRANSISTOR(SI)	
Q205B	2SC4081R	TRANSISTOR(SI)	
Q205C	2SC4081R	TRANSISTOR(SI)	
Q205D	2SC4081R	TRANSISTOR(SI)	
Q205E	2SC4081R	TRANSISTOR(SI)	
Q205F	2SC4081R	TRANSISTOR(SI)	
Q205G	2SC4081R	TRANSISTOR(SI)	
Q205H	2SC4081R	TRANSISTOR(SI)	
Q206A	2SC4081R	TRANSISTOR(SI)	
Q206B	2SC4081R	TRANSISTOR(SI)	
Q206C	2SC4081R	TRANSISTOR(SI)	
Q206D	2SC4081R	TRANSISTOR(SI)	
Q206E	2SC4081R	TRANSISTOR(SI)	
Q206F	2SC4081R	TRANSISTOR(SI)	
Q206G	2SC4081R	TRANSISTOR(SI)	
Q206H	2SC4081R	TRANSISTOR(SI)	
Q207A	PQVTDTC143E	TRANSISTOR(SI)	
Q207B	PQVTDTC143E	TRANSISTOR(SI)	
Q207C	PQVTDTC143E	TRANSISTOR(SI)	
Q207D	PQVTDTC143E	TRANSISTOR(SI)	
Q207E	PQVTDTC143E	TRANSISTOR(SI)	

Ref. No.	Part No.	Part Name & Description	Remarks
Q207F	PQVTDTC143E	TRANSISTOR(SI)	
Q207G	PQVTDTC143E	TRANSISTOR(SI)	
Q207H	PQVTDTC143E	TRANSISTOR(SI)	
Q208A	2SA1576R	TRANSISTOR(SI)	
Q208B	2SA1576R	TRANSISTOR(SI)	
Q208C	2SA1576R	TRANSISTOR(SI)	
Q208D	2SA1576R	TRANSISTOR(SI)	
Q208E	2SA1576R	TRANSISTOR(SI)	
Q208F	2SA1576R	TRANSISTOR(SI)	
Q208G	2SA1576R	TRANSISTOR(SI)	
Q208H	2SA1576R	TRANSISTOR(SI)	
Q210	2SD2137	TRANSISTOR(SI)	
Q211	UN5113	TRANSISTOR(SI)	S
Q213	2SC4081R	TRANSISTOR(SI)	
Q214	UN5213	TRANSISTOR(SI)	S
Q215	2SB1417P	TRANSISTOR(SI)	
Q221	PQVTDTC143E	TRANSISTOR(SI)	
Q251	2SB1237R	TRANSISTOR(SI)	
Q252	UN5113	TRANSISTOR(SI)	S
		(DIODES)	
D204A	RLS71	DIODE(SI)	
D204B	RLS71	DIODE(SI)	
D204C	RLS71	DIODE(SI)	
D204D	RLS71	DIODE(SI)	
D204E	RLS71	DIODE(SI)	
D204F	RLS71	DIODE(SI)	
D204G	RLS71	DIODE(SI)	
D204H	RLS71	DIODE(SI)	
D205A	RLS71	DIODE(SI)	
D205B	RLS71	DIODE(SI)	
D205C	RLS71	DIODE(SI)	
D205D	RLS71	DIODE(SI)	
D205E	RLS71	DIODE(SI)	
D205F	RLS71	DIODE(SI)	
D205G	RLS71	DIODE(SI)	
D205H	RLS71	DIODE(SI)	
D206A	RLS71	DIODE(SI)	
D206B	RLS71	DIODE(SI)	
D206C	RLS71	DIODE(SI)	
D206D	RLS71	DIODE(SI)	
D206E	RLS71	DIODE(SI)	
D206F	RLS71	DIODE(SI)	
D206G	RLS71	DIODE(SI)	
D206H	RLS71	DIODE(SI)	
D207A	RLS71	DIODE(SI)	
D207B	RLS71	DIODE(SI)	
D207C	RLS71	DIODE(SI)	
D207D	RLS71	DIODE(SI)	
D207E	RLS71	DIODE(SI)	
D207F	RLS71	DIODE(SI)	

Ref. No.	Part No.	Part Name & Description	Remarks
D207G	RLS71	DIODE(SI)	
D207H	RLS71	DIODE(SI)	
D210A	RLS71	DIODE(SI)	
D210B	RLS71	DIODE(SI)	
D210C	RLS71	DIODE(SI)	
D210D	RLS71	DIODE(SI)	
D210E	RLS71	DIODE(SI)	
D210F	RLS71	DIODE(SI)	
D210G	RLS71	DIODE(SI)	
D210H	RLS71	DIODE(SI)	
D211A	MA4039	DIODE(SI)	
D211B	MA4039	DIODE(SI)	
D211C	MA4039	DIODE(SI)	
D211D	MA4039	DIODE(SI)	
D211E	MA4039	DIODE(SI)	
D211F	MA4039	DIODE(SI)	
D211G	MA4039	DIODE(SI)	
D211H	MA4039	DIODE(SI)	
D212A	MA151WK	DIODE(SI)	S
D212B	MA151WK	DIODE(SI)	S
D212C	MA151WK	DIODE(SI)	S
D212D	MA151WK	DIODE(SI)	S
D212E	MA151WK	DIODE(SI)	S
D212F	MA151WK	DIODE(SI)	S
D212G	MA151WK	DIODE(SI)	S
D212H	MA151WK	DIODE(SI)	S
D213A	1SS181	DIODE(SI)	
D213B	1SS181	DIODE(SI)	
D213C	1SS181	DIODE(SI)	
D213D	1SS181	DIODE(SI)	
D213E	1SS181	DIODE(SI)	
D213F	1SS181	DIODE(SI)	
D213G	1SS181	DIODE(SI)	
D213H	1SS181	DIODE(SI)	
D214A	RLS71	DIODE(SI)	
D214B	RLS71	DIODE(SI)	
D214C	RLS71	DIODE(SI)	
D214D	RLS71	DIODE(SI)	
D214E	RLS71	DIODE(SI)	
D214F	RLS71	DIODE(SI)	
D214G	RLS71	DIODE(SI)	
D214H	RLS71	DIODE(SI)	
D220	RLS71	DIODE(SI)	
D221	RLS71	DIODE(SI)	
D223	RLS71	DIODE(SI)	
D225	RLS71	DIODE(SI)	
D251	MA4056	DIODE(SI)	
D252	RLS71	DIODE(SI)	
		(CONNECTORS)	
CN200	PQJS50A04Y	CONNECTOR,50P	

Ref. No.	Part No.	Part Name & Description	Remarks
CN201	PQJS50R15Z	CONNECTOR,50P	
		(CAPACITORS)	
C200A	ECEA1HKS2R2	2.2	S
C200B	ECEA1HKS2R2	2.2	S
C200C	ECEA1HKS2R2	2.2	S
C200D	ECEA1HKS2R2	2.2	S
C200E	ECEA1HKS2R2	2.2	S
C200F	ECEA1HKS2R2	2.2	S
C200G	ECEA1HKS2R2	2.2	S
C200H	ECEA1HKS2R2	2.2	S
C202A	ECEA1HKS2R2	2.2	S
C202B	ECEA1HKS2R2	2.2	S
C202C	ECEA1HKS2R2	2.2	S
C202D	ECEA1HKS2R2	2.2	S
C202E	ECEA1HKS2R2	2.2	S
C202F	ECEA1HKS2R2	2.2	S
C202G	ECEA1HKS2R2	2.2	S
C202H	ECEA1HKS2R2	2.2	S
C204A	ECEA1HU100	10	
C204B	ECEA1HU100	10	
C204C	ECEA1HU100	10	
C204D	ECEA1HU100	10	
C204E	ECEA1HU100	10	
C204F	ECEA1HU100	10	
C204G	ECEA1HU100	10	
C204H	ECEA1HU100	10	
C205A	ECEA1EN100S	10	
C205B	ECEA1EN100S	10	
C205C	ECEA1EN100S	10	
C205D	ECEA1EN100S	10	
C205E	ECEA1EN100S	10	
C205F	ECEA1EN100S	10	
C205G	ECEA1EN100S	10	
C205H	ECEA1EN100S	10	
C206A	ECEA1EN100S	10	
C206B	ECEA1EN100S	10	
C206C	ECEA1EN100S	10	
C206D	ECEA1EN100S	10	
C206E	ECEA1EN100S	10	
C206F	ECEA1EN100S	10	
C206G	ECEA1EN100S	10	
C206H	ECEA1EN100S	10	
C207A	PQ4R10XJ000	0	
C207B	PQ4R10XJ000	0	
C207C	PQ4R10XJ000	0	
C207D	PQ4R10XJ000	0	
C207E	PQ4R10XJ000	0	
C207F	PQ4R10XJ000	0	
C207G	PQ4R10XJ000	0	
C207H	PQ4R10XJ000	0	
C208A	PQ4R10XJ000	0	
C208B	PQ4R10XJ000	0	
C208C	PQ4R10XJ000	0	

Ref. No.	Part No.	Part Name & Description	Remarks
C208D	PQ4R10XJ000	0	
C208E	PQ4R10XJ000	0	
C208F	PQ4R10XJ000	0	
C208G	PQ4R10XJ000	0	
C208H	PQ4R10XJ000	0	
C209A	PQCUV1H223KB	0.022	S
C209B	PQCUV1H223KB	0.022	S
C209C	PQCUV1H223KB	0.022	S
C209D	PQCUV1H223KB	0.022	S
C209E	PQCUV1H223KB	0.022	S
C209F	PQCUV1H223KB	0.022	S
C209G	PQCUV1H223KB	0.022	S
C209H	PQCUV1H223KB	0.022	S
C210A	PQCUV1H223KB	0.022	S
C210B	PQCUV1H223KB	0.022	S
C210C	PQCUV1H223KB	0.022	S
C210D	PQCUV1H223KB	0.022	S
C210E	PQCUV1H223KB	0.022	S
C210F	PQCUV1H223KB	0.022	S
C210G	PQCUV1H223KB	0.022	S
C210H	PQCUV1H223KB	0.022	S
C211A	ECEA1HN4R7S	4.7	S
C211B	ECEA1HN4R7S	4.7	S
C211C	ECEA1HN4R7S	4.7	S
C211D	ECEA1HN4R7S	4.7	S
C211E	ECEA1HN4R7S	4.7	S
C211F	ECEA1HN4R7S	4.7	S
C211G	ECEA1HN4R7S	4.7	S
C211H	ECEA1HN4R7S	4.7	S
C212A	PQCUV1H103KB	0.01	S
C212B	PQCUV1H103KB	0.01	S
C212C	PQCUV1H103KB	0.01	S
C212D	PQCUV1H103KB	0.01	S
C212E	PQCUV1H103KB	0.01	S
C212F	PQCUV1H103KB	0.01	S
C212G	PQCUV1H103KB	0.01	S
C212H	PQCUV1H103KB	0.01	S
C213A	PQCUV1H103KB	0.01	S
C213B	PQCUV1H103KB	0.01	S
C213C	PQCUV1H103KB	0.01	S
C213D	PQCUV1H103KB	0.01	S
C213E	PQCUV1H103KB	0.01	S
C213F	PQCUV1H103KB	0.01	S
C213G	PQCUV1H103KB	0.01	S
C213H	PQCUV1H103KB	0.01	S
C216A	ECEA1HKS2R2	2.2	S
C216B	ECEA1HKS2R2	2.2	S
C216C	ECEA1HKS2R2	2.2	S
C216D	ECEA1HKS2R2	2.2	S
C216E	ECEA1HKS2R2	2.2	S
C216F	ECEA1HKS2R2	2.2	S
C216G	ECEA1HKS2R2	2.2	S
C216H	ECEA1HKS2R2	2.2	S

Ref. No.	Part No.	Part Name & Description	Remarks
C217A	PQCUV1H680JC	68p	
C217B	PQCUV1H680JC	68p	
C217C	PQCUV1H680JC	68p	
C217D	PQCUV1H680JC	68p	
C217E	PQCUV1H680JC	68p	
C217F	PQCUV1H680JC	68p	
C217G	PQCUV1H680JC	68p	
C217H	PQCUV1H680JC	68p	
C218A	PQCUV1H680JC	68p	
C218B	PQCUV1H680JC	68p	
C218C	PQCUV1H680JC	68p	
C218D	PQCUV1H680JC	68p	
C218E	PQCUV1H680JC	68p	
C218F	PQCUV1H680JC	68p	
C218G	PQCUV1H680JC	68p	
C218H	PQCUV1H680JC	68p	
C219A	ECUV1H104MD	0.1	S
C219B	ECUV1H104MD	0.1	S
C219C	ECUV1H104MD	0.1	S
C219D	ECUV1H104MD	0.1	S
C219E	ECUV1H104MD	0.1	S
C219F	ECUV1H104MD	0.1	S
C219G	ECUV1H104MD	0.1	S
C219H	ECUV1H104MD	0.1	S
C220	ECEA1EU101	100	
C220A	ECUV1H393KB	0.039	
C220B	ECUV1H393KB	0.039	
C220C	ECUV1H393KB	0.039	
C220D	ECUV1H393KB	0.039	
C220E	ECUV1H393KB	0.039	
C220F	ECUV1H393KB	0.039	
C220G	ECUV1H393KB	0.039	
C220H	ECUV1H393KB	0.039	
C221	ECEA1EU101	100	
C222A	ECEA1HU100	10	
C222B	ECEA1HU100	10	
C222C	ECEA1HU100	10	
C222D	ECEA1HU100	10	
C222E	ECEA1HU100	10	
C222F	ECEA1HU100	10	
C222G	ECEA1HU100	10	
C222H	ECEA1HU100	10	
C251	PQCUV1H223KB	0.022	S
C252	PQCUV1H223KB	0.022	S
C253	PQCUV1H223KB	0.022	S
C254	PQCUV1H223KB	0.022	S
C255	ECEA1EU330	33	
C256	PQCUV1H221JC	220p	
C257	PQCUV1H104ZF	0.1	
C258	PQCUV1H104ZF	0.1	
C259	PQCUV1H104ZF	0.1	

Ref. No.	Part No.	Part Name & Description	Remarks
C260	ECEA1ESS471U	470	
C262	ECEA1EU330	33	
C263	ECEA1EU330	33	
C264	ECEA1EU330	33	
C265	PQCUV1H104ZF	0.1	
C270	ECEA1AU101	100	
C271	PQCUV1H104ZF	0.1	
C272	PQCUV1H104ZF	0.1	
C273	PQCUV1H104ZF	0.1	
C280	PQCUV1H104ZF	0.1	
C281	PQCUV1H104ZF	0.1	
C282	PQCUV1H104ZF	0.1	
C283	PQCUV1H104ZF	0.1	
C284	PQCUV1H104ZF	0.1	
C285	PQCUV1H104ZF	0.1	
C287	PQCUV1H104ZF	0.1	
C288	PQCUV1H104ZF	0.1	
C289	PQCUV1H104ZF	0.1	
C291	PQCUV1H104ZF	0.1	
C292	ECEA1EU101	100	
C295	PQCUV1H104ZF	0.1	
C296	PQCUV1H104ZF	0.1	
C299A	PQCUV1H221JC	220p	
C299B	PQCUV1H221JC	220p	
C299C	PQCUV1H221JC	220p	
C299D	PQCUV1H221JC	220p	
C299E	PQCUV1H221JC	220p	
C299F	PQCUV1H221JC	220p	
C299G	PQCUV1H221JC	220p	
C299H	PQCUV1H221JC	220p	
C311	PQCUV1H390JC	39p	
C900A	PQCUV1H560JC	56p	
C900B	PQCUV1H560JC	56p	
C900C	PQCUV1H560JC	56p	
C900D	PQCUV1H560JC	56p	
C900E	PQCUV1H560JC	56p	
C900F	PQCUV1H560JC	56p	
C900G	PQCUV1H560JC	56p	
C900H	PQCUV1H560JC	56p	
C901A	PQCUV1H560JC	56p	
C901B	PQCUV1H560JC	56p	
C901C	PQCUV1H560JC	56p	
C901D	PQCUV1H560JC	56p	
C901E	PQCUV1H560JC	56p	
C901F	PQCUV1H560JC	56p	
C901G	PQCUV1H560JC	56p	
C901H	PQCUV1H560JC	56p	
		(RESISTORS)	

Ref. No.	Part No.	Part Name & Description	Remarks
R200A	PQ4R10XJ390	39	
R200B	PQ4R10XJ390	39	
R200C	PQ4R10XJ390	39	
R200D	PQ4R10XJ390	39	
R200E	PQ4R10XJ390	39	
R200F	PQ4R10XJ390	39	
R200G	PQ4R10XJ390	39	
R200H	PQ4R10XJ390	39	
R201A	PQ4R10XJ222	2.2k	
R201B	PQ4R10XJ222	2.2k	
R201C	PQ4R10XJ222	2.2k	
R201D	PQ4R10XJ222	2.2k	
R201E	PQ4R10XJ222	2.2k	
R201F	PQ4R10XJ222	2.2k	
R201G	PQ4R10XJ222	2.2k	
R201H	PQ4R10XJ222	2.2k	
R202A	PQ4R10XJ222	2.2k	
R202B	PQ4R10XJ222	2.2k	
R202C	PQ4R10XJ222	2.2k	
R202D	PQ4R10XJ222	2.2k	
R202E	PQ4R10XJ222	2.2k	
R202F	PQ4R10XJ222	2.2k	
R202G	PQ4R10XJ222	2.2k	
R202H	PQ4R10XJ222	2.2k	
R203	PQ4R10XJ101	100	
R204	PQ4R10XJ105	1M	
R205A	ERDS2TJ220	22	
R205B	ERDS2TJ220	22	
R205C	ERDS2TJ220	22	
R205D	ERDS2TJ220	22	
R205E	ERDS2TJ220	22	
R205F	ERDS2TJ220	22	
R205G	ERDS2TJ220	22	
R205H	ERDS2TJ220	22	
R206A	ERDS2TJ680	68	
R206B	ERDS2TJ680	68	
R206C	ERDS2TJ680	68	
R206D	ERDS2TJ680	68	
R206E	ERDS2TJ680	68	
R206F	ERDS2TJ680	68	
R206G	ERDS2TJ680	68	
R206H	ERDS2TJ680	68	
R207A	PQ4R10XJ682	6.8k	
R207B	PQ4R10XJ682	6.8k	
R207C	PQ4R10XJ682	6.8k	
R207D	PQ4R10XJ682	6.8k	
R207E	PQ4R10XJ682	6.8k	
R207F	PQ4R10XJ682	6.8k	
R207G	PQ4R10XJ682	6.8k	
R207H	PQ4R10XJ682	6.8k	
R208A	ERDS2TJ220	22	
R208B	ERDS2TJ220	22	
R208C	ERDS2TJ220	22	
R208D	ERDS2TJ220	22	

Ref. No.	Part No.	Part Name & Description	Remarks
R208E	ERDS2TJ220	22	
R208F	ERDS2TJ220	22	
R208G	ERDS2TJ220	22	
R208H	ERDS2TJ220	22	
R209A	ERDS2TJ680	68	
R209B	ERDS2TJ680	68	
R209C	ERDS2TJ680	68	
R209D	ERDS2TJ680	68	
R209E	ERDS2TJ680	68	
R209F	ERDS2TJ680	68	
R209G	ERDS2TJ680	68	
R209H	ERDS2TJ680	68	
R210A	PQ4R10XJ682	6.8k	
R210B	PQ4R10XJ682	6.8k	
R210C	PQ4R10XJ682	6.8k	
R210D	PQ4R10XJ682	6.8k	
R210E	PQ4R10XJ682	6.8k	
R210F	PQ4R10XJ682	6.8k	
R210G	PQ4R10XJ682	6.8k	
R210H	PQ4R10XJ682	6.8k	
R211A	PQ4R10XF3000	300	
R211B	PQ4R10XF3000	300	
R211C	PQ4R10XF3000	300	
R211D	PQ4R10XF3000	300	
R211E	PQ4R10XF3000	300	
R211F	PQ4R10XF3000	300	
R211G	PQ4R10XF3000	300	
R211H	PQ4R10XF3000	300	
R212A	PQ4R10XF2401	2.4k	
R212B	PQ4R10XF2401	2.4k	
R212C	PQ4R10XF2401	2.4k	
R212D	PQ4R10XF2401	2.4k	
R212E	PQ4R10XF2401	2.4k	
R212F	PQ4R10XF2401	2.4k	
R212G	PQ4R10XF2401	2.4k	
R212H	PQ4R10XF2401	2.4k	
R213A	PQ4R10XF3001	3k	
R213B	PQ4R10XF3001	3k	
R213C	PQ4R10XF3001	3k	
R213D	PQ4R10XF3001	3k	
R213E	PQ4R10XF3001	3k	
R213F	PQ4R10XF3001	3k	
R213G	PQ4R10XF3001	3k	
R213H	PQ4R10XF3001	3k	
R214A	PQ4R10XF8202	82k	
R214B	PQ4R10XF8202	82k	
R214C	PQ4R10XF8202	82k	
R214D	PQ4R10XF8202	82k	
R214E	PQ4R10XF8202	82k	
R214F	PQ4R10XF8202	82k	
R214G	PQ4R10XF8202	82k	
R214H	PQ4R10XF8202	82k	
R215A	PQ4R10XF1103	110k	

Ref. No.	Part No.	Part Name & Description	Remarks
R215B	PQ4R10XF1103	110k	
R215C	PQ4R10XF1103	110k	
R215D	PQ4R10XF1103	110k	
R215E	PQ4R10XF1103	110k	
R215F	PQ4R10XF1103	110k	
R215G	PQ4R10XF1103	110k	
R215H	PQ4R10XF1103	110k	
R216A	PQ4R10XF1003	100k	
R216B	PQ4R10XF1003	100k	
R216C	PQ4R10XF1003	100k	
R216D	PQ4R10XF1003	100k	
R216E	PQ4R10XF1003	100k	
R216F	PQ4R10XF1003	100k	
R216G	PQ4R10XF1003	100k	
R216H	PQ4R10XF1003	100k	
R219A	PQ4R10XF1103	110k	
R219B	PQ4R10XF1103	110k	
R219C	PQ4R10XF1103	110k	
R219D	PQ4R10XF1103	110k	
R219E	PQ4R10XF1103	110k	
R219F	PQ4R10XF1103	110k	
R219G	PQ4R10XF1103	110k	
R219H	PQ4R10XF1103	110k	
R220A	PQ4R10XF1103	110k	
R220B	PQ4R10XF1103	110k	
R220C	PQ4R10XF1103	110k	
R220D	PQ4R10XF1103	110k	
R220E	PQ4R10XF1103	110k	
R220F	PQ4R10XF1103	110k	
R220G	PQ4R10XF1103	110k	
R220H	PQ4R10XF1103	110k	
R221A	PQ4R10XF9102	91k	
R221B	PQ4R10XF9102	91k	
R221C	PQ4R10XF9102	91k	
R221D	PQ4R10XF9102	91k	
R221E	PQ4R10XF9102	91k	
R221F	PQ4R10XF9102	91k	
R221G	PQ4R10XF9102	91k	
R221H	PQ4R10XF9102	91k	
R222A	PQ4R10XF3000	300	
R222B	PQ4R10XF3000	300	
R222C	PQ4R10XF3000	300	
R222D	PQ4R10XF3000	300	
R222E	PQ4R10XF3000	300	
R222F	PQ4R10XF3000	300	
R222G	PQ4R10XF3000	300	
R222H	PQ4R10XF3000	300	
R224A	PQ4R10XJ153	15k	
R224B	PQ4R10XJ153	15k	
R224C	PQ4R10XJ153	15k	
R224D	PQ4R10XJ153	15k	
R224E	PQ4R10XJ153	15k	
R224F	PQ4R10XJ153	15k	

Ref. No.	Part No.	Part Name & Description	Remarks
R224G	PQ4R10XJ153	15k	
R224H	PQ4R10XJ153	15k	
R225A	PQ4R10XJ333	33k	
R225B	PQ4R10XJ333	33k	
R225C	PQ4R10XJ333	33k	
R225D	PQ4R10XJ333	33k	
R225E	PQ4R10XJ333	33k	
R225F	PQ4R10XJ333	33k	
R225G	PQ4R10XJ333	33k	
R225H	PQ4R10XJ333	33k	
R226A	PQ4R10XJ103	10k	
R226B	PQ4R10XJ103	10k	
R226C	PQ4R10XJ103	10k	
R226D	PQ4R10XJ103	10k	
R226E	PQ4R10XJ103	10k	
R226F	PQ4R10XJ103	10k	
R226G	PQ4R10XJ103	10k	
R226H	PQ4R10XJ103	10k	
R227A	PQ4R10XJ473	47k	
R227B	PQ4R10XJ473	47k	
R227C	PQ4R10XJ473	47k	
R227D	PQ4R10XJ473	47k	
R227E	PQ4R10XJ473	47k	
R227F	PQ4R10XJ473	47k	
R227G	PQ4R10XJ473	47k	
R227H	PQ4R10XJ473	47k	
R228A	PQ4R10XJ123	12k	
R228B	PQ4R10XJ123	12k	
R228C	PQ4R10XJ123	12k	
R228D	PQ4R10XJ123	12k	
R228E	PQ4R10XJ123	12k	
R228F	PQ4R10XJ123	12k	
R228G	PQ4R10XJ123	12k	
R228H	PQ4R10XJ123	12k	
R229A	PQ4R10XJ333	33k	
R229B	PQ4R10XJ333	33k	
R229C	PQ4R10XJ333	33k	
R229D	PQ4R10XJ333	33k	
R229E	PQ4R10XJ333	33k	
R229F	PQ4R10XJ333	33k	
R229G	PQ4R10XJ333	33k	
R229H	PQ4R10XJ333	33k	
R230A	PQ4R10XJ103	10k	
R230B	PQ4R10XJ103	10k	
R230C	PQ4R10XJ103	10k	
R230D	PQ4R10XJ103	10k	
R230E	PQ4R10XJ103	10k	
R230F	PQ4R10XJ103	10k	
R230G	PQ4R10XJ103	10k	
R230H	PQ4R10XJ103	10k	
R231A	PQ4R10XJ102	1k	
R231B	PQ4R10XJ102	1k	
R231C	PQ4R10XJ102	1k	

Ref. No.	Part No.	Part Name & Description	Remarks
R231D	PQ4R10XJ102	1k	
R231E	PQ4R10XJ102	1k	
R231F	PQ4R10XJ102	1k	
R231G	PQ4R10XJ102	1k	
R231H	PQ4R10XJ102	1k	
R232A	PQRD2TJ102	1k	
R232B	PQRD2TJ102	1k	
R232C	PQRD2TJ102	1k	
R232D	PQRD2TJ102	1k	
R232E	PQRD2TJ102	1k	
R232F	PQRD2TJ102	1k	
R232G	PQRD2TJ102	1k	
R232H	PQRD2TJ102	1k	
R233A	PQ4R10XJ5R6	5.6	
R233B	PQ4R10XJ5R6	5.6	
R233C	PQ4R10XJ5R6	5.6	
R233D	PQ4R10XJ5R6	5.6	
R233E	PQ4R10XJ5R6	5.6	
R233F	PQ4R10XJ5R6	5.6	
R233G	PQ4R10XJ5R6	5.6	
R233H	PQ4R10XJ5R6	5.6	
R234A	PQ4R10XJ222	2.2k	
R234B	PQ4R10XJ222	2.2k	
R234C	PQ4R10XJ222	2.2k	
R234D	PQ4R10XJ222	2.2k	
R234E	PQ4R10XJ222	2.2k	
R234F	PQ4R10XJ222	2.2k	
R234G	PQ4R10XJ222	2.2k	
R234H	PQ4R10XJ222	2.2k	
R235A	PQ4R10XJ561	560	
R235B	PQ4R10XJ561	560	
R235C	PQ4R10XJ561	560	
R235D	PQ4R10XJ561	560	
R235E	PQ4R10XJ561	560	
R235F	PQ4R10XJ561	560	
R235G	PQ4R10XJ561	560	
R235H	PQ4R10XJ561	560	
R236A	PQ4R10XJ222	2.2k	
R236B	PQ4R10XJ222	2.2k	
R236C	PQ4R10XJ222	2.2k	
R236D	PQ4R10XJ222	2.2k	
R236E	PQ4R10XJ222	2.2k	
R236F	PQ4R10XJ222	2.2k	
R236G	PQ4R10XJ222	2.2k	
R236H	PQ4R10XJ222	2.2k	
R237A	PQ4R10XJ561	560	
R237B	PQ4R10XJ561	560	
R237C	PQ4R10XJ561	560	
R237D	PQ4R10XJ561	560	
R237E	PQ4R10XJ561	560	
R237F	PQ4R10XJ561	560	
R237G	PQ4R10XJ561	560	
R237H	PQ4R10XJ561	560	
R238A	PQ4R10XJ390	39	

Ref. No.	Part No.	Part Name & Description	Remarks
R238B	PQ4R10XJ390	39	
R238C	PQ4R10XJ390	39	
R238D	PQ4R10XJ390	39	
R238E	PQ4R10XJ390	39	
R238F	PQ4R10XJ390	39	
R238G	PQ4R10XJ390	39	
R238H	PQ4R10XJ390	39	
R239A	PQ4R10XJ222	2.2k	
R239B	PQ4R10XJ222	2.2k	
R239C	PQ4R10XJ222	2.2k	
R239D	PQ4R10XJ222	2.2k	
R239E	PQ4R10XJ222	2.2k	
R239F	PQ4R10XJ222	2.2k	
R239G	PQ4R10XJ222	2.2k	
R239H	PQ4R10XJ222	2.2k	
R240A	PQ4R10XJ222	2.2k	
R240B	PQ4R10XJ222	2.2k	
R240C	PQ4R10XJ222	2.2k	
R240D	PQ4R10XJ222	2.2k	
R240E	PQ4R10XJ222	2.2k	
R240F	PQ4R10XJ222	2.2k	
R240G	PQ4R10XJ222	2.2k	
R240H	PQ4R10XJ222	2.2k	
R241	PQ4R10XJ473	47k	
R242	PQ4R10XJ682	6.8k	
R243	PQ4R10XJ223	22k	
R244	PQ4R10XJ472	4.7k	
R245	PQ4R10XJ153	15k	
R246	PQ4R10XJ152	1.5k	
R247	PQ4R10XJ223	22k	
R248A	PQ4R10XJ561	560	
R248B	PQ4R10XJ561	560	
R248C	PQ4R10XJ561	560	
R248D	PQ4R10XJ561	560	
R248E	PQ4R10XJ561	560	
R248F	PQ4R10XJ561	560	
R248G	PQ4R10XJ561	560	
R248H	PQ4R10XJ561	560	
R251	PQ4R10XJ103	10k	
R252	PQ4R10XJ103	10k	
R253	PQ4R10XJ103	10k	
R254	PQ4R10XJ103	10k	
R255	PQ4R10XJ393	39k	
R256	PQ4R10XJ104	100k	
R257	PQ4R10XJ334	330k	
R258	PQ4R10XJ393	39k	
R259	PQ4R10XJ104	100k	
R260	PQ4R10XJ334	330k	
R261	PQRD1TJ820	82	
R262	PQ4R10XJ152	1.5k	
R263	PQ4R10XJ152	1.5k	

Ref. No.	Part No.	Part Name & Description	Remarks
R264	PQ4R10XJ152	1.5k	
R265	PQ4R10XJ103	10k	
R266	PQ4R10XJ103	10k	
R267	PQ4R10XJ101	100	
R268	PQ4R10XJ101	100	
R269	PQ4R10XJ101	100	
R270	ERDS2TJ220	22	
R270A	PQ4R10XJ103	10k	
R270B	PQ4R10XJ103	10k	
R270C	PQ4R10XJ103	10k	
R270D	PQ4R10XJ103	10k	
R270E	PQ4R10XJ103	10k	
R270F	PQ4R10XJ103	10k	
R270G	PQ4R10XJ103	10k	
R270H	PQ4R10XJ103	10k	
R271	PQ4R10XJ682	6.8k	
R272	PQ4R10XJ101	100	
R275A	PQ4R10XJ563	56k	
R275B	PQ4R10XJ563	56k	
R275C	PQ4R10XJ563	56k	
R275D	PQ4R10XJ563	56k	
R275E	PQ4R10XJ563	56k	
R275F	PQ4R10XJ563	56k	
R275G	PQ4R10XJ563	56k	
R275H	PQ4R10XJ563	56k	
R276A	PQ4R10XJ560	56	
R276B	PQ4R10XJ560	56	
R276C	PQ4R10XJ560	56	
R276D	PQ4R10XJ560	56	
R276E	PQ4R10XJ560	56	
R276F	PQ4R10XJ560	56	
R276G	PQ4R10XJ560	56	
R276H	PQ4R10XJ560	56	
R277A	PQ4R10XJ560	56	
R277B	PQ4R10XJ560	56	
R277C	PQ4R10XJ560	56	
R277D	PQ4R10XJ560	56	
R277E	PQ4R10XJ560	56	
R277F	PQ4R10XJ560	56	
R277G	PQ4R10XJ560	56	
R277H	PQ4R10XJ560	56	
R278A	PQ4R10XJ560	56	
R278B	PQ4R10XJ560	56	
R278C	PQ4R10XJ560	56	
R278D	PQ4R10XJ560	56	
R278E	PQ4R10XJ560	56	
R278F	PQ4R10XJ560	56	
R278G	PQ4R10XJ560	56	
R278H	PQ4R10XJ560	56	
R279A	PQ4R10XJ560	56	
R279B	PQ4R10XJ560	56	
R279C	PQ4R10XJ560	56	
R279D	PQ4R10XJ560	56	

Ref. No.	Part No.	Part Name & Description	Remarks
R279E	PQ4R10XJ560	56	
R279F	PQ4R10XJ560	56	
R279G	PQ4R10XJ560	56	
R279H	PQ4R10XJ560	56	
R280	PQ4R10XJ223	22k	
R285	PQ4R10XJ122	1.2k	
R286	PQ4R10XJ152	1.5k	
R289A	PQ4R10XJ5R6	5.6	
R289B	PQ4R10XJ5R6	5.6	
R289C	PQ4R10XJ5R6	5.6	
R289D	PQ4R10XJ5R6	5.6	
R289E	PQ4R10XJ5R6	5.6	
R289F	PQ4R10XJ5R6	5.6	
R289G	PQ4R10XJ5R6	5.6	
R289H	PQ4R10XJ5R6	5.6	
R290A	PQ4R10XJ472	4.7k	
R290B	PQ4R10XJ472	4.7k	
R290C	PQ4R10XJ472	4.7k	
R290D	PQ4R10XJ472	4.7k	
R290E	PQ4R10XJ472	4.7k	
R290F	PQ4R10XJ472	4.7k	
R290G	PQ4R10XJ472	4.7k	
R290H	PQ4R10XJ472	4.7k	
R291A	PQ4R10XJ472	4.7k	
R291B	PQ4R10XJ472	4.7k	
R291C	PQ4R10XJ472	4.7k	
R291D	PQ4R10XJ472	4.7k	
R291E	PQ4R10XJ472	4.7k	
R291F	PQ4R10XJ472	4.7k	
R291G	PQ4R10XJ472	4.7k	
R291H	PQ4R10XJ472	4.7k	
R292A	PQ4R10XJ472	4.7k	
R292B	PQ4R10XJ472	4.7k	
R292C	PQ4R10XJ472	4.7k	
R292D	PQ4R10XJ472	4.7k	
R292E	PQ4R10XJ472	4.7k	
R292F	PQ4R10XJ472	4.7k	
R292G	PQ4R10XJ472	4.7k	
R292H	PQ4R10XJ472	4.7k	
R293	PQ4R10XF6801	6.8k	
R294	PQ4R10XF1201	1.2k	
R295A	PQ4R10XJ101	100	
R295B	PQ4R10XJ101	100	
R295C	PQ4R10XJ101	100	
R295D	PQ4R10XJ101	100	
R295E	PQ4R10XJ101	100	
R295F	PQ4R10XJ101	100	
R295G	PQ4R10XJ101	100	
R295H	PQ4R10XJ101	100	
R299A	PQ4R10XJ101	100	
R299B	PQ4R10XJ101	100	
R299C	PQ4R10XJ101	100	

Ref. No.	Part No.	Part Name & Description	Remarks
R299D	PQ4R10XJ101	100	
R299E	PQ4R10XJ101	100	
R299F	PQ4R10XJ101	100	
R299G	PQ4R10XJ101	100	
R299H	PQ4R10XJ101	100	
R300	PQ4R10XJ331	330	
R301	PQ4R10XJ331	330	
R302	PQ4R10XJ331	330	
R303	PQ4R10XJ331	330	
R304	PQ4R10XJ331	330	
R305	PQ4R10XJ331	330	
R306	PQ4R10XJ331	330	
R307	PQ4R10XJ331	330	
R308	PQ4R10XJ331	330	
R309	PQ4R10XJ331	330	
R310	PQ4R10XJ331	330	
R311	PQ4R10XJ331	330	
R312	PQ4R10XJ331	330	
R313	PQ4R10XJ331	330	
R314	PQ4R10XJ331	330	
R315	PQ4R10XJ331	330	
R316	PQ4R10XJ331	330	
R317	PQ4R10XJ331	330	
R318	PQ4R10XJ331	330	
R319	PQ4R10XJ331	330	
R320	PQ4R10XJ331	330	
R321	PQ4R10XJ331	330	
R322	PQ4R10XJ331	330	
R323	PQ4R10XJ331	330	
R324	PQ4R10XJ331	330	
R801	PQ4R10XJ330	33	
R802	PQ4R10XJ330	33	
R803	PQ4R10XJ330	33	
R804	PQ4R10XJ330	33	
R805	PQ4R10XJ330	33	
R900A	PQ4R10XF9102	91k	
R900B	PQ4R10XF9102	91k	
R900C	PQ4R10XF9102	91k	
R900D	PQ4R10XF9102	91k	
R900E	PQ4R10XF9102	91k	
R900F	PQ4R10XF9102	91k	
R900G	PQ4R10XF9102	91k	
R900H	PQ4R10XF9102	91k	
R903A	PQ4R10XJ5R6	5.6	
R903B	PQ4R10XJ5R6	5.6	
R903C	PQ4R10XJ5R6	5.6	
R903D	PQ4R10XJ5R6	5.6	
R903E	PQ4R10XJ5R6	5.6	
R903F	PQ4R10XJ5R6	5.6	

Ref. No.	Part No.	Part Name & Description	Remarks
R903G	PQ4R10XJ5R6	5.6	
R903H	PQ4R10XJ5R6	5.6	
R904A	PQ4R10XJ101	100	
R904B	PQ4R10XJ101	100	
R904C	PQ4R10XJ101	100	
R904D	PQ4R10XJ101	100	
R904E	PQ4R10XJ101	100	
R904F	PQ4R10XJ101	100	
R904G	PQ4R10XJ101	100	
R904H	PQ4R10XJ101	100	
J201	PQ4R10XJ000	0	
J202	PQ4R10XJ000	0	
J203	PQ4R10XJ000	0	
J204	PQ4R10XJ000	0	
J250A	PQ4R10XJ000	0	
J250B	PQ4R10XJ000	0	
J250C	PQ4R10XJ000	0	
J250D	PQ4R10XJ000	0	
J250E	PQ4R10XJ000	0	
J250F	PQ4R10XJ000	0	
J250G	PQ4R10XJ000	0	
J250H	PQ4R10XJ000	0	
J252A	PQ4R10XJ000	0	
J252B	PQ4R10XJ000	0	
J252C	PQ4R10XJ000	0	
J252D	PQ4R10XJ000	0	
J252E	PQ4R10XJ000	0	
J252F	PQ4R10XJ000	0	
J252G	PQ4R10XJ000	0	
J252H	PQ4R10XJ000	0	
J254A	PQ4R10XJ000	0	
J254B	PQ4R10XJ000	0	
J254C	PQ4R10XJ000	0	
J254D	PQ4R10XJ000	0	
J254E	PQ4R10XJ000	0	
J254F	PQ4R10XJ000	0	
J254G	PQ4R10XJ000	0	
J254H	PQ4R10XJ000	0	
J256A	PQ4R10XJ000	0	
J256B	PQ4R10XJ000	0	
J256C	PQ4R10XJ000	0	
J256D	PQ4R10XJ000	0	
J256E	PQ4R10XJ000	0	
J256F	PQ4R10XJ000	0	
J256G	PQ4R10XJ000	0	
J256H	PQ4R10XJ000	0	
J302A	ERDS2TJ0T	0	
J302D	ERDS2TJ0T	0	
J302F	ERDS2TJ0T	0	
J302G	ERDS2TJ0T	0	
J302H	ERDS2TJ0T	0	
		(COILS)	

Ref. No.	Part No.	Part Name & Description	Remarks
L202A	PQLE106	COIL	S
L202B	PQLE106	COIL	S
L202C	PQLE106	COIL	S
L202D	PQLE106	COIL	S
L202E	PQLE106	COIL	S
L202F	PQLE106	COIL	S
L202G	PQLE106	COIL	S
L202H	PQLE106	COIL	S
L203A	PQLE106	COIL	S
L203B	PQLE106	COIL	S
L203C	PQLE106	COIL	S
L203D	PQLE106	COIL	S
L203E	PQLE106	COIL	S
L203F	PQLE106	COIL	S
L203G	PQLE106	COIL	S
L203H	PQLE106	COIL	S
		(FUSES)	
F200	PQBA1N20NMAL	FUSE	⚠
F201	PQBA1N20NMAL	FUSE	⚠
		(RELAYS)	
RLY200A	PQSL44Z	RELAY	S
RLY202A	PQSL41Z	RELAY	S
RLY202B	PQSL41Z	RELAY	S
RLY202C	PQSL41Z	RELAY	S
RLY202D	PQSL41Z	RELAY	S
RLY202E	PQSL41Z	RELAY	S
RLY202F	PQSL41Z	RELAY	S
RLY202G	PQSL41Z	RELAY	S
RLY202H	PQSL41Z	RELAY	S
		(VARISTORS)	
ZNR202A	PQVDNV039D03	VARISTOR	S
ZNR202B	PQVDNV039D03	VARISTOR	S
ZNR202C	PQVDNV039D03	VARISTOR	S
ZNR202D	PQVDNV039D03	VARISTOR	S
ZNR202E	PQVDNV039D03	VARISTOR	S
ZNR202F	PQVDNV039D03	VARISTOR	S
ZNR202G	PQVDNV039D03	VARISTOR	S
ZNR202H	PQVDNV039D03	VARISTOR	S
ZNR203A	PQVDNV039D03	VARISTOR	S
ZNR203B	PQVDNV039D03	VARISTOR	S
ZNR203C	PQVDNV039D03	VARISTOR	S
ZNR203D	PQVDNV039D03	VARISTOR	S
ZNR203E	PQVDNV039D03	VARISTOR	S
ZNR203F	PQVDNV039D03	VARISTOR	S
ZNR203G	PQVDNV039D03	VARISTOR	S
ZNR203H	PQVDNV039D03	VARISTOR	S
ZNR204A	PQVDNV039D03	VARISTOR	S
ZNR204B	PQVDNV039D03	VARISTOR	S
ZNR204C	PQVDNV039D03	VARISTOR	S
ZNR204D	PQVDNV039D03	VARISTOR	S

Ref. No.	Part No.	Part Name & Description	Remarks
ZNR204E	PQVDNV039D03	VARISTOR	S
ZNR204F	PQVDNV039D03	VARISTOR	S
ZNR204G	PQVDNV039D03	VARISTOR	S
ZNR204H	PQVDNV039D03	VARISTOR	S
ZNR205A	PQVDNV039D03	VARISTOR	S
ZNR205B	PQVDNV039D03	VARISTOR	S
ZNR205C	PQVDNV039D03	VARISTOR	S
ZNR205D	PQVDNV039D03	VARISTOR	S
ZNR205E	PQVDNV039D03	VARISTOR	S
ZNR205F	PQVDNV039D03	VARISTOR	S
ZNR205G	PQVDNV039D03	VARISTOR	S
ZNR205H	PQVDNV039D03	VARISTOR	S
		(TRANSFORMERS)	
T201A	ETE13K38AY	TRANSFORMER	S
T201B	ETE13K38AY	TRANSFORMER	S
T201C	ETE13K38AY	TRANSFORMER	S
T201D	ETE13K38AY	TRANSFORMER	S
T201E	ETE13K38AY	TRANSFORMER	S
T201F	ETE13K38AY	TRANSFORMER	S
T201G	ETE13K38AY	TRANSFORMER	S
T201H	ETE13K38AY	TRANSFORMER	S
		(CERAMIC FILTER)	
X201	PQVBFC3584A1	CERAMIC FILTER	S

16.5. CO BOARD PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
PCB3	PSWP3TA1232M	CO BOARD ASS'Y (RTL)	
		(ICS)	
IC101A	PQVINJM4558M	IC	S
IC101B	PQVINJM4558M	IC	S
IC101C	PQVINJM4558M	IC	S
IC101D	PQVINJM4558M	IC	S
IC101E	PQVINJM4558M	IC	S
IC101F	PQVINJM4558M	IC	S
IC101G	PQVINJM4558M	IC	S
IC101H	PQVINJM4558M	IC	S
IC102A	PQVIMC45503W	IC	S
IC102B	PQVIMC45503W	IC	S
IC102C	PQVIMC45503W	IC	S
IC102D	PQVIMC45503W	IC	S
IC102E	PQVIMC45503W	IC	S
IC102F	PQVIMC45503W	IC	
IC102G	PQVIMC45503W	IC	
IC102H	PQVIMC45503W	IC	
IC111	PQVI92018554	IC	S
IC112	PQVISN7L138M	IC	
IC114	PQVISN7L138M	IC	
IC116	PQVISN7L640M	IC	

Ref. No.	Part No.	Part Name & Description	Remarks
IC117	PQVISN7L08S	IC	S
IC120	PQVISN7L04S	IC	S
IC121	PQVISN7L14S	IC	S
IC122	PQVISN7L273M	IC	
IC123	PQVISN7L14S	IC	S
		(TRANSISTORS)	
Q101A	2SD1897	TRANSISTOR(SI)	
Q101B	2SD1897	TRANSISTOR(SI)	
Q101C	2SD1897	TRANSISTOR(SI)	
Q101D	2SD1897	TRANSISTOR(SI)	
Q101E	2SD1897	TRANSISTOR(SI)	
Q101F	2SD1897	TRANSISTOR(SI)	
Q101G	2SD1897	TRANSISTOR(SI)	
Q101H	2SD1897	TRANSISTOR(SI)	
Q111	2SB1237R	TRANSISTOR(SI)	
Q112	UN5113	TRANSISTOR(SI)	S
Q120A	2SA1627	TRANSISTOR(SI)	
Q120B	2SA1627	TRANSISTOR(SI)	
Q120C	2SA1627	TRANSISTOR(SI)	
Q120D	2SA1627	TRANSISTOR(SI)	
Q120E	2SA1627	TRANSISTOR(SI)	
Q120F	2SA1627	TRANSISTOR(SI)	
Q120G	2SA1627	TRANSISTOR(SI)	
Q120H	2SA1627	TRANSISTOR(SI)	
		(DIODES)	
D101A	PQVDS1YB60F1	DIODE(SI)	S
D101B	PQVDS1YB60F1	DIODE(SI)	S
D101C	PQVDS1YB60F1	DIODE(SI)	S
D101D	PQVDS1YB60F1	DIODE(SI)	S
D101E	PQVDS1YB60F1	DIODE(SI)	S
D101F	PQVDS1YB60F1	DIODE(SI)	S
D101G	PQVDS1YB60F1	DIODE(SI)	S
D101H	PQVDS1YB60F1	DIODE(SI)	S
D102A	MA4020	DIODE(SI)	S
D102B	MA4020	DIODE(SI)	S
D102C	MA4020	DIODE(SI)	S
D102D	MA4020	DIODE(SI)	S
D102E	MA4020	DIODE(SI)	S
D102F	MA4020	DIODE(SI)	S
D102G	MA4020	DIODE(SI)	S
D102H	MA4020	DIODE(SI)	S
D103A	MA4020	DIODE(SI)	S
D103B	MA4020	DIODE(SI)	S
D103C	MA4020	DIODE(SI)	S
D103D	MA4020	DIODE(SI)	S
D103E	MA4020	DIODE(SI)	S
D103F	MA4020	DIODE(SI)	S
D103G	MA4020	DIODE(SI)	S
D103H	MA4020	DIODE(SI)	S
D104A	MA3047	DIODE(SI)	
D104B	MA3047	DIODE(SI)	

Ref. No.	Part No.	Part Name & Description	Remarks
D104C	MA3047	DIODE(SI)	
D104D	MA3047	DIODE(SI)	
D104E	MA3047	DIODE(SI)	
D104F	MA3047	DIODE(SI)	
D104G	MA3047	DIODE(SI)	
D104H	MA3047	DIODE(SI)	
D105A	MA3047	DIODE(SI)	
D105B	MA3047	DIODE(SI)	
D105C	MA3047	DIODE(SI)	
D105D	MA3047	DIODE(SI)	
D105E	MA3047	DIODE(SI)	
D105F	MA3047	DIODE(SI)	
D105G	MA3047	DIODE(SI)	
D105H	MA3047	DIODE(SI)	
D154	MA4056	DIODE(SI)	
D155	MA723	DIODE(SI)	
		(CONNECTORS, JACKS AND CORDS)	
CN101	PQJS50R15Z	CONNECTOR,50P	
CN104	PQJS22A15Z	CONNECTOR,22P	
CN105	PQJS08A15Z	CONNECTOR,8P	
CN106	PQJS22A15Z	CONNECTOR,22P	
CN107	PQJS08A15Z	CONNECTOR,8P	
CN108	PQJJ1TB25Y	JACK	
CN109	PQJJ1TB25Y	JACK	
CN110	PQJJ1TB25Y	JACK	
CN111	PQJJ1TB25Y	JACK	
CN112	PQJS04A15Z	CONNECTOR CORD	
CN113	PQJS04A15Z	CONNECTOR CORD	
		(CAPACITORS)	
C101A	ECKDKC222KB	0.0022	S
C101B	ECKDKC222KB	0.0022	S
C101C	ECKDKC222KB	0.0022	S
C101D	ECKDKC222KB	0.0022	S
C101E	ECKDKC222KB	0.0022	S
C101F	ECKDKC222KB	0.0022	S
C101G	ECKDKC222KB	0.0022	S
C101H	ECKDKC222KB	0.0022	S
C102A	ECQE2474KF	0.47	
C102B	ECQE2474KF	0.47	
C102C	ECQE2474KF	0.47	
C102D	ECQE2474KF	0.47	
C102E	ECQE2474KF	0.47	
C102F	ECQE2474KF	0.47	
C102G	ECQE2474KF	0.47	
C102H	ECQE2474KF	0.47	
C103A	ECEA1HU100	10	
C103B	ECEA1HU100	10	
C103C	ECEA1HU100	10	
C103D	ECEA1HU100	10	
C103E	ECEA1HU100	10	
C103F	ECEA1HU100	10	

Ref. No.	Part No.	Part Name & Description	Remarks
C103G	ECEA1HU100	10	
C103H	ECEA1HU100	10	
C104A	ECEA1HU220	22	
C104B	ECEA1HU220	22	
C104C	ECEA1HU220	22	
C104D	ECEA1HU220	22	
C104E	ECEA1HU220	22	
C104F	ECEA1HU220	22	
C104G	ECEA1HU220	22	
C104H	ECEA1HU220	22	
C105A	PQCUV1H102J	0.001	S
C105B	PQCUV1H102J	0.001	S
C105C	PQCUV1H102J	0.001	S
C105D	PQCUV1H102J	0.001	S
C105E	PQCUV1H102J	0.001	S
C105F	PQCUV1H102J	0.001	S
C105G	PQCUV1H102J	0.001	S
C105H	PQCUV1H102J	0.001	S
C106A	PQCUV1H563KB	0.056	
C106B	PQCUV1H563KB	0.056	
C106C	PQCUV1H563KB	0.056	
C106D	PQCUV1H563KB	0.056	
C106E	PQCUV1H563KB	0.056	
C106F	PQCUV1H563KB	0.056	
C106G	PQCUV1H563KB	0.056	
C106H	PQCUV1H563KB	0.056	
C107A	PQCUV1H820JC	82p	
C107B	PQCUV1H820JC	82p	
C107C	PQCUV1H820JC	82p	
C107D	PQCUV1H820JC	82p	
C107E	PQCUV1H820JC	82p	
C107F	PQCUV1H820JC	82p	
C107G	PQCUV1H820JC	82p	
C107H	PQCUV1H820JC	82p	
C108A	ECUV1H183KB	0.018	
C108B	ECUV1H183KB	0.018	
C108C	ECUV1H183KB	0.018	
C108D	ECUV1H183KB	0.018	
C108E	ECUV1H183KB	0.018	
C108F	ECUV1H183KB	0.018	
C108G	ECUV1H183KB	0.018	
C108H	ECUV1H183KB	0.018	
C109A	PQCUV1H223KB	0.022	S
C109B	PQCUV1H223KB	0.022	S
C109C	PQCUV1H223KB	0.022	S
C109D	PQCUV1H223KB	0.022	S
C109E	PQCUV1H223KB	0.022	S
C109F	PQCUV1H223KB	0.022	S
C109G	PQCUV1H223KB	0.022	S
C109H	PQCUV1H223KB	0.022	S
C110A	PQCUV1H223KB	0.022	S
C110B	PQCUV1H223KB	0.022	S
C110C	PQCUV1H223KB	0.022	S

Ref. No.	Part No.	Part Name & Description	Remarks
C110D	PQCUV1H223KB	0.022	S
C110E	PQCUV1H223KB	0.022	S
C110F	PQCUV1H223KB	0.022	S
C110G	PQCUV1H223KB	0.022	S
C110H	PQCUV1H223KB	0.022	S
C111A	ECEA1HKSR47	0.47	
C111B	ECEA1HKSR47	0.47	
C111C	ECEA1HKSR47	0.47	
C111D	ECEA1HKSR47	0.47	
C111E	ECEA1HKSR47	0.47	
C111F	ECEA1HKSR47	0.47	
C111G	ECEA1HKSR47	0.47	
C111H	ECEA1HKSR47	0.47	
C120	PQCUV1H101JC	100p	S
C151	ECEA1HU330	33	
C152	ECEA1HU330	33	
C153	ECEA1HU330	33	
C154	ECEA1HKS010	1	
C155	PQCUV1H223KB	0.022	S
C156	ECEA0JM222B	2200	
C170	ECEA1ESS331	330	
		(RESISTORS)	
R101A	ERQN1VJ273	27k	
R101B	ERQN1VJ273	27k	
R101C	ERQN1VJ273	27k	
R101D	ERQN1VJ273	27k	
R101E	ERQN1VJ273	27k	
R101F	ERQN1VJ273	27k	
R101G	ERQN1VJ273	27k	
R101H	ERQN1VJ273	27k	
R102A	PQ4R10XJ822	8.2k	
R102B	PQ4R10XJ822	8.2k	
R102C	PQ4R10XJ822	8.2k	
R102D	PQ4R10XJ822	8.2k	
R102E	PQ4R10XJ822	8.2k	
R102F	PQ4R10XJ822	8.2k	
R102G	PQ4R10XJ822	8.2k	
R102H	PQ4R10XJ822	8.2k	
R103A	ERDS2TJ390	39	
R103B	ERDS2TJ390	39	
R103C	ERDS2TJ390	39	
R103D	ERDS2TJ390	39	
R103E	ERDS2TJ390	39	
R103F	ERDS2TJ390	39	
R103G	ERDS2TJ390	39	
R103H	ERDS2TJ390	39	
R104A	PQ4R10XJ103	10k	
R104B	PQ4R10XJ103	10k	
R104C	PQ4R10XJ103	10k	
R104D	PQ4R10XJ103	10k	

Ref. No.	Part No.	Part Name & Description	Remarks
R104E	PQ4R10XJ103	10k	
R104F	PQ4R10XJ103	10k	
R104G	PQ4R10XJ103	10k	
R104H	PQ4R10XJ103	10k	
R105A	PQ4R10XJ471	470	
R105B	PQ4R10XJ471	470	
R105C	PQ4R10XJ471	470	
R105D	PQ4R10XJ471	470	
R105E	PQ4R10XJ471	470	
R105F	PQ4R10XJ471	470	
R105G	PQ4R10XJ471	470	
R105H	PQ4R10XJ471	470	
R107A	PQ4R10XF1211	1.21k	
R107B	PQ4R10XF1211	1.21k	
R107C	PQ4R10XF1211	1.21k	
R107D	PQ4R10XF1211	1.21k	
R107E	PQ4R10XF1211	1.21k	
R107F	PQ4R10XF1211	1.21k	
R107G	PQ4R10XF1211	1.21k	
R107H	PQ4R10XF1211	1.21k	
R108A	PQ4R10XJ821	820	
R108B	PQ4R10XJ821	820	
R108C	PQ4R10XJ821	820	
R108D	PQ4R10XJ821	820	
R108E	PQ4R10XJ821	820	
R108F	PQ4R10XJ821	820	
R108G	PQ4R10XJ821	820	
R108H	PQ4R10XJ821	820	
R110A	PQ4R10XF2323	232k	
R110B	PQ4R10XF2323	232k	
R110C	PQ4R10XF2323	232k	
R110D	PQ4R10XF2323	232k	
R110E	PQ4R10XF2323	232k	
R110F	PQ4R10XF2323	232k	
R110G	PQ4R10XF2323	232k	
R110H	PQ4R10XF2323	232k	
R111A	PQ4R10XF1003	100k	
R111B	PQ4R10XF1003	100k	
R111C	PQ4R10XF1003	100k	
R111D	PQ4R10XF1003	100k	
R111E	PQ4R10XF1003	100k	
R111F	PQ4R10XF1003	100k	
R111G	PQ4R10XF1003	100k	
R111H	PQ4R10XF1003	100k	
R112A	PQ4R10XF1003	100k	
R112B	PQ4R10XF1003	100k	
R112C	PQ4R10XF1003	100k	
R112D	PQ4R10XF1003	100k	
R112E	PQ4R10XF1003	100k	
R112F	PQ4R10XF1003	100k	
R112G	PQ4R10XF1003	100k	
R112H	PQ4R10XF1003	100k	
R113A	PQ4R10XF1003	100k	

Ref. No.	Part No.	Part Name & Description	Remarks
R113B	PQ4R10XF1003	100k	
R113C	PQ4R10XF1003	100k	
R113D	PQ4R10XF1003	100k	
R113E	PQ4R10XF1003	100k	
R113F	PQ4R10XF1003	100k	
R113G	PQ4R10XF1003	100k	
R113H	PQ4R10XF1003	100k	
R114A	PQ4R10XF4202	42k	
R114B	PQ4R10XF4202	42k	
R114C	PQ4R10XF4202	42k	
R114D	PQ4R10XF4202	42k	
R114E	PQ4R10XF4202	42k	
R114F	PQ4R10XF4202	42k	
R114G	PQ4R10XF4202	42k	
R114H	PQ4R10XF4202	42k	
R115A	PQ4R10XF1203	120k	
R115B	PQ4R10XF1203	120k	
R115C	PQ4R10XF1203	120k	
R115D	PQ4R10XF1203	120k	
R115E	PQ4R10XF1203	120k	
R115F	PQ4R10XF1203	120k	
R115G	PQ4R10XF1203	120k	
R115H	PQ4R10XF1203	120k	
R116A	PQ4R10XF4702	47k	
R116B	PQ4R10XF4702	47k	
R116C	PQ4R10XF4702	47k	
R116D	PQ4R10XF4702	47k	
R116E	PQ4R10XF4702	47k	
R116F	PQ4R10XF4702	47k	
R116G	PQ4R10XF4702	47k	
R116H	PQ4R10XF4702	47k	
R118A	ERDS2TJ122	1.2k	
R118B	ERDS2TJ122	1.2k	
R118C	ERDS2TJ122	1.2k	
R118D	ERDS2TJ122	1.2k	
R118E	ERDS2TJ122	1.2k	
R118F	ERDS2TJ122	1.2k	
R118G	ERDS2TJ122	1.2k	
R118H	ERDS2TJ122	1.2k	
R119A	PQ4R10XF1211	1.21k	
R119B	PQ4R10XF1211	1.21k	
R119C	PQ4R10XF1211	1.21k	
R119D	PQ4R10XF1211	1.21k	
R119E	PQ4R10XF1211	1.21k	
R119F	PQ4R10XF1211	1.21k	
R119G	PQ4R10XF1211	1.21k	
R119H	PQ4R10XF1211	1.21k	
R122A	PQ4R10XJ222	2.2k	
R122B	PQ4R10XJ222	2.2k	
R122C	PQ4R10XJ222	2.2k	
R122D	PQ4R10XJ222	2.2k	
R122E	PQ4R10XJ222	2.2k	
R122F	PQ4R10XJ222	2.2k	

Ref. No.	Part No.	Part Name & Description	Remarks
R122G	PQ4R10XJ222	2.2k	
R122H	PQ4R10XJ222	2.2k	
R125	PQ4R10XJ101	100	
R126	PQ4R10XJ101	100	
R127	PQ4R10XJ101	100	
R128	PQ4R10XJ101	100	
R129	PQ4R10XJ101	100	
R130	PQ4R10XJ101	100	
R131	PQ4R10XJ101	100	
R132	PQ4R10XJ101	100	
R153	PQ4R10XJ152	1.5k	
R154	PQRD1VJ221	220	
R155	PQ4R10XJ103	10k	
R156	PQ4R10XJ103	10k	
R157	PQ4R10XJ103	10k	
R158	PQ4R10XJ103	10k	
R159	PQ4R10XJ103	10k	
R160	PQ4R10XJ103	10k	
R161	PQ4R10XJ101	100	
R161A	ERDS2TJ560	56	
R161B	ERDS2TJ560	56	
R161C	ERDS2TJ560	56	
R161D	ERDS2TJ560	56	
R161E	ERDS2TJ560	56	
R161F	ERDS2TJ560	56	
R161G	ERDS2TJ560	56	
R161H	ERDS2TJ560	56	
R162A	PQ4R10XJ104	100k	
R162B	PQ4R10XJ104	100k	
R162C	PQ4R10XJ104	100k	
R162D	PQ4R10XJ104	100k	
R162E	PQ4R10XJ104	100k	
R162F	PQ4R10XJ104	100k	
R162G	PQ4R10XJ104	100k	
R162H	PQ4R10XJ104	100k	
R163A	PQRQ25VJ5R6	5.6	
R163B	PQRQ25VJ5R6	5.6	
R163C	PQRQ25VJ5R6	5.6	
R163D	PQRQ25VJ5R6	5.6	
R163E	PQRQ25VJ5R6	5.6	
R163F	PQRQ25VJ5R6	5.6	
R163G	PQRQ25VJ5R6	5.6	
R163H	PQRQ25VJ5R6	5.6	
R164A	ERDS2TJ272	2.7k	
R164B	ERDS2TJ272	2.7k	
R164C	ERDS2TJ272	2.7k	
R164D	ERDS2TJ272	2.7k	
R164E	ERDS2TJ272	2.7k	
R164F	ERDS2TJ272	2.7k	
R164G	ERDS2TJ272	2.7k	
R164H	ERDS2TJ272	2.7k	

Ref. No.	Part No.	Part Name & Description	Remarks
R165A	PQ4R10XJ471	470	
R165B	PQ4R10XJ471	470	
R165C	PQ4R10XJ471	470	
R165D	PQ4R10XJ471	470	
R165E	PQ4R10XJ471	470	
R165F	PQ4R10XJ471	470	
R165G	PQ4R10XJ471	470	
R165H	PQ4R10XJ471	470	
R171	PQ4R10XJ331	330	
R172	PQ4R10XJ331	330	
R173	PQ4R10XJ331	330	
R174	PQ4R10XJ331	330	
R175	PQ4R10XJ331	330	
R176	PQ4R10XJ331	330	
R177	PQ4R10XJ331	330	
R178	PQ4R10XJ331	330	
R179	PQ4R10XJ331	330	
R180	PQ4R10XJ331	330	
R181	PQ4R10XJ331	330	
R182	PQ4R10XJ331	330	
R191	PQ4R10XJ331	330	
R192	PQ4R10XJ331	330	
R193	PQ4R10XJ331	330	
R194	PQ4R10XJ331	330	
R195	PQ4R10XJ331	330	
R196	PQ4R10XJ331	330	
R197	PQ4R10XJ331	330	
R198	PQ4R10XJ331	330	
R200A	PQ4R10XJ473	47k	
R200B	PQ4R10XJ473	47k	
R200C	PQ4R10XJ473	47k	
R200D	PQ4R10XJ473	47k	
R200E	PQ4R10XJ473	47k	
R200F	PQ4R10XJ473	47k	
R200G	PQ4R10XJ473	47k	
R200H	PQ4R10XJ473	47k	
J151	PQ4R10XJ000	0	
J152	PQ4R10XJ000	0	
J153	PQ4R10XJ000	0	
J154	PQ4R10XJ000	0	
J155A	PQ4R10XJ000	0	
J155B	PQ4R10XJ000	0	
J155C	PQ4R10XJ000	0	
J155D	PQ4R10XJ000	0	
J155E	PQ4R10XJ000	0	
J155F	PQ4R10XJ000	0	
J155G	PQ4R10XJ000	0	
J155H	PQ4R10XJ000	0	
J156A	PQ4R10XJ000	0	

Ref. No.	Part No.	Part Name & Description	Remarks
J156B	PQ4R10XJ000	0	
J156C	PQ4R10XJ000	0	
J156D	PQ4R10XJ000	0	
J156E	PQ4R10XJ000	0	
J156F	PQ4R10XJ000	0	
J156G	PQ4R10XJ000	0	
J156H	PQ4R10XJ000	0	
		(COILS)	
L101A	PQLE106	COIL	S
L101B	PQLE106	COIL	S
L101C	PQLE106	COIL	S
L101D	PQLE106	COIL	S
L101E	PQLE106	COIL	S
L101F	PQLE106	COIL	S
L101G	PQLE106	COIL	S
L101H	PQLE106	COIL	S
L102A	PQLE106	COIL	S
L102B	PQLE106	COIL	S
L102C	PQLE106	COIL	S
L102D	PQLE106	COIL	S
L102E	PQLE106	COIL	S
L102F	PQLE106	COIL	S
L102G	PQLE106	COIL	S
L102H	PQLE106	COIL	S
L103A	PQLE106	COIL	S
L103B	PQLE106	COIL	S
L103C	PQLE106	COIL	S
L103D	PQLE106	COIL	S
L103E	PQLE106	COIL	S
L103F	PQLE106	COIL	S
L103G	PQLE106	COIL	S
L103H	PQLE106	COIL	S
L104A	PQLE106	COIL	S
L104B	PQLE106	COIL	S
L104C	PQLE106	COIL	S
L104D	PQLE106	COIL	S
L104E	PQLE106	COIL	S
L104F	PQLE106	COIL	S
L104G	PQLE106	COIL	S
L104H	PQLE106	COIL	S
		(PHOTO ELECTRIC TRANSDUCERS)	
PC101A	0N3181	PHOTO COUPLER	
PC101B	0N3181	PHOTO COUPLER	
PC101C	0N3181	PHOTO COUPLER	
PC101D	0N3181	PHOTO COUPLER	
PC101E	0N3181	PHOTO COUPLER	
PC101F	0N3181	PHOTO COUPLER	
PC101G	0N3181	PHOTO COUPLER	
PC101H	0N3181	PHOTO COUPLER	
PC102A	PQVITLP627	PHOTO COUPLER	
PC102B	PQVITLP627	PHOTO COUPLER	
PC102C	PQVITLP627	PHOTO COUPLER	

Ref. No.	Part No.	Part Name & Description	Remarks
PC102D	PQVITLP627	PHOTO COUPLER	
PC102E	PQVITLP627	PHOTO COUPLER	
PC102F	PQVITLP627	PHOTO COUPLER	
PC102G	PQVITLP627	PHOTO COUPLER	
PC102H	PQVITLP627	PHOTO COUPLER	
		(VARISTORS)	
SA101A	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA101B	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA101C	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA101D	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA101E	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA101F	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA101G	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA101H	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA102A	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA102B	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA102C	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA102D	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA102E	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA102F	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA102G	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA102H	PQVDRA311PT3	VARISTOR (SAUGE ABSORBER)	
SA103A	PQVDDSV301L	VARISTOR (SAUGE ABSORBER)	
SA103B	PQVDDSV301L	VARISTOR (SAUGE ABSORBER)	
SA103C	PQVDDSV301L	VARISTOR (SAUGE ABSORBER)	
SA103D	PQVDDSV301L	VARISTOR (SAUGE ABSORBER)	
SA103E	PQVDDSV301L	VARISTOR (SAUGE ABSORBER)	
SA103F	PQVDDSV301L	VARISTOR (SAUGE ABSORBER)	
SA103G	PQVDDSV301L	VARISTOR (SAUGE ABSORBER)	
SA103H	PQVDDSV301L	VARISTOR (SAUGE ABSORBER)	
SA104	PQVDDSV301L	VARISTOR (SAUGE ABSORBER)	
ZR101A	ERZC07DK820	VARISTOR	S
ZR101B	ERZC07DK820	VARISTOR	S
ZR101C	ERZC07DK820	VARISTOR	S
ZR101D	ERZC07DK820	VARISTOR	S
ZR101E	ERZC07DK820	VARISTOR	S
ZR101F	ERZC07DK820	VARISTOR	S
ZR101G	ERZC07DK820	VARISTOR	S
ZR101H	ERZC07DK820	VARISTOR	S
		(TRANSFORMERS)	
T101A	ETA14Y184AYM	TRANSFORMER	S
T101B	ETA14Y184AYM	TRANSFORMER	S
T101C	ETA14Y184AYM	TRANSFORMER	S
T101D	ETA14Y184AYM	TRANSFORMER	S
T101E	ETA14Y184AYM	TRANSFORMER	S
T101F	ETA14Y184AYM	TRANSFORMER	S
T101G	ETA14Y184AYM	TRANSFORMER	S
T101H	ETA14Y184AYM	TRANSFORMER	S

16.6. SMDR/LED BOARD PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
PCB4	PSWP4TA1232M	SMDR/LED BOARD ASS'Y (RTL)	
		(DIODE)	
LED	LN242RP	LED	
		(CONNECTORS)	
CN701	PQJS06R49Z	CONNECTOR,6P	
CN702	PQJS25P31Z	CONNECTOR,25P	
CN703	PQJS02R48Z	CONNECTOR,2P	
		(CAPACITORS)	
C700	ECKD1H392MD	0.0039	S
C701	ECKD1H392MD	0.0039	S
C702	ECKD1H392MD	0.0039	S
C703	ECKD1H392MD	0.0039	S
		(RESISTORS)	
R700	ERDS2TJ821	820	
R701	ERDS2TJ821	820	
R702	ERDS2TJ821	820	

16.7. MOTHER BOARD PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
PCB5	PSWP5TA1232M	MOTHER BOARD ASS'Y (RTL)	
		(CONNECTORS)	
CN401	PQJP7D46Z	CONNECTOR,7P	
CN402	PQJP64A09Z	CONNECTOR,64P	
CN403	PQJP50A09Z	CONNECTOR,50P	
CN404	PQJP50A09Z	CONNECTOR,50P	
CN405	PQJP50A09Z	CONNECTOR,50P	
CN406	PQJP60A09Z	CONNECTOR,60P	
CN407	PQJP60A09Z	CONNECTOR,60P	
CN408	PQJP60A09Z	CONNECTOR,60P	
CN409	PQJP50A09Z	CONNECTOR,50P	
		(COMPONENTS COMBINATIONS)	
RA401	PQRS8B8332J	RESISTOR ARRAY	
RA402	EXBP88472K	RESISTOR ARRAY	S

16.8. POWER SUPPLY UNIT PARTS

16.8.1. Type-A

Ref. No.	Part No.	Part Name & Description	Remarks
91	PSMC1084Z	COVER	⚠
92	PSMC1085Z	CASE	⚠
93	PQHR447Z	SPACER-A	
94	PSHE1095Z	SPACER-B	
95	PQJP04R07X	CONNECTOR,4P	
100	PSMH1183Z	ANGLE	
102	XBA1C50ND1L	FUSE	⚠
103	PSQT1766Z	LABEL	
104	PSWE1012Z	INLET ASS'Y	⚠
PCB6	PSWP6TD1232C	POWER SUPPLY BOARD ASS'Y (RTL)	⚠
		(ICS)	
IC1	PSVIKA1M0880	IC	
IC2	PSVIKA3843B	IC	
IC4	PSVIKA431Z	IC	
IC5	PSVIKA431Z	IC	
IC9	PQVILA6500	IC	
		(TRANSISTORS)	
Q2	KSP2222A	TRANSISTOR(SI)	
Q3	KSP2222A	TRANSISTOR(SI)	
Q4	KSP2907A	TRANSISTOR(SI)	
Q5	PSVTIRFZ44	TRANSISTOR(SI)	
Q6	KSA1220A0	TRANSISTOR(SI)	
Q7	KSP2222A	TRANSISTOR(SI)	
Q8	KSP2222A	TRANSISTOR(SI)	
Q9	KSP2907A	TRANSISTOR(SI)	
Q10	KSP2222A	TRANSISTOR(SI)	
Q13	KSP2222A	TRANSISTOR(SI)	
Q14	KSP2907A	TRANSISTOR(SI)	
Q15	KSP2222A	TRANSISTOR(SI)	
		(DIODES)	
D1	PSVDUF4007	DIODE(SI)	
D2	PSVDBYW32	DIODE(SI)	
D3	PSVDIN4004GP	DIODE(SI)	
D4	PSVDIN4004GP	DIODE(SI)	
D5	PSVDP6KE350A	DIODE(SI)	
D8	PSVDS20LC20U	DIODE(SI)	
D10	PSVDSF10SC4	DIODE(SI)	
D11	PSVDBYV27200	DIODE(SI)	
D12	PSVDS20LC20U	DIODE(SI)	
D13	PSVDBYV27200	DIODE(SI)	
D14	PSVD1N4148	DIODE(SI)	
D15	PSVD1N4148	DIODE(SI)	
D16	PSVD1N4148	DIODE(SI)	
D19	PSVDBYV38	DIODE(SI)	
DB1	PSVDD5SBA60	DIODE(SI)	

Ref. No.	Part No.	Part Name & Description	Remarks
ZD1	PQVDMZJ6R2	DIODE(SI)	
ZD2	PQVDMZJ36B	DIODE(SI)	
ZD3	PQVDMZJ5R1B	DIODE(SI)	
		(CONNECTORS)	
CN400	PQJP2D98Z	CONNECTOR,2P	
CN401	PSJS07Q91Z	CONNECTOR,7P	
CN402	PQJP4D30Z	CONNECTOR,4P	
CN403	PQJP4D46Z	CONNECTOR,4P	
LG1	PSJT1035Z	CONNECTOR	
LG2	PSJT1035Z	CONNECTOR	
		(CAPACITORS)	
C1	PSCCEMU2D471	470	
C2	PSC223K630	0.022	
C3	PSCCEMU2D471	470	
C4	PSCCEST1H220	22	
C5	PSCCELT1H010	1	
C8	PSCKR215C683	0.068	
C9	PSC154K400	0.15	
C10	PSCCELT1H010	1	
C14	PSCS215C104J	0.1	
C15	PSCS215C222J	2200	
C16	PSCCELT1H010	1	
C17	PSCS215C102J	0.001	
C18	PSCCELT1H010	1	
C19	PSCCEMZ1E152	1500	
C20	PSCCEMZ1E152	1500	
C23	PSCS215C103J	0.01	
C25	PSCCEMZ1E221	220	
C27	PSCCEMZ1A152	1500	
C28	PSCYB2H222K	0.0022	
C29	PSCYB2H222K	0.0022	
C30	PSCCELT1H100	10	
C31	PSCCEMZ1E221	220	
C32	PSCCELT1H010	1	
C33	PSCS215C104J	0.1	
C34	PSCS215C104J	0.1	
C35	PSCYB2H222K	0.0022	
C36	PSCYB2H222K	0.0022	
C37	PSCCEMZ1E152	1500	
C38	PSCCEMZ1E152	1500	
C39	PSCCEMZ1E221	220	
C40	PSCS215C104J	0.1	
C49	PSCS215C104J	0.1	
C50	PSCCEMZ1C221	220	
C52	PSCCELT2W010	1	

Ref. No.	Part No.	Part Name & Description	Remarks
C60	PSCCELT1H100	10	
C101	PSCP2335M104	0.1	
C102	PSCP2335M224	0.22	
C103	PSCHCYE2G222	2200	
C104	PSCHCYE2G222	2200	
C105	PSCHCYE2G332	3300	
C106	PSCHCYE2G332	3300	
		(RESISTORS)	
R1	ERDS2TJ474	470k	
R2	ERDS1TJ204	200k	
R3	ERDS1TJ204	200k	
R4	ERG3SJ104	100k	
R5	ERG1SJ473	47k	
R6	ERDS2TJ472	4.7k	
R8	ERDS2TJ102	1k	
R9	ERDS2TJ242	2.4k	
R10	ERDS2TJ242	2.4k	
R11	ER016CKF1202	12k	
R12	ERDS2TJ513	51k	
R13	ERDS1TJ101	100	
R14	PSRMPR5R50MJ	5.5	
R15	ERDS2TJ202	2k	
R16	ERDS2TJ513	51k	
R17	ERDS2TJ472	4.7k	
R18	ERDS2TJ362	3.6k	
R19	ERDS2TJ390	39	
R20	ERG3SJ361	360	
R21	ER016CKF4701	4.7k	
R23	ERDS2TJ330	33	
R24	ERDS2TJ101	100	
R30	ERG1SJ100E	10	
R31	ERDS2TJ472	4.7k	
R32	ERDS2TJ243	24k	
R33	ERDS2TJ432	4.3k	
R34	ERDS2TJ101	100	
R35	ERG1SJ100E	10	
R36	PSRRQR5W270J	27	
R37	ERG1SJ100E	10	
R38	ERG1SJ201	200	
R39	ERG1SJ100E	10	
R40	ERDS2TJ511	510	
R41	ERDS1TJ241	240	
R43	ERDS2TJ243	24k	
R44	PSRMPR5R80MJ	5.8	
R51	ERDS2TJ474	470k	
R57	ERDS2TJ123	12k	

Ref. No.	Part No.	Part Name & Description	Remarks
R62	ERDS2TJ472	4.7k	
R63	ERDS2TJ562	5.6k	
R64	ERDS2TJ202	2k	
R65	ERDS2TJ561	560	
R66	ERDS2TJ2R2	2.2	
R67	ERDS1TJ101	100	
R68	ERDS2TJ472	4.7k	
R69	ERG3SJ104	100k	
R70	PSRMPR5R50MJ	5.5	
R71	ERDS2TJ472	4.7k	
R72	ERDS2TJ203	20k	
R73	ERDS2TJ472	4.7k	
R74	ERDS2TJ513	51k	
R75	ERDS2TJ472	4.7k	
R88	ERDS2TJ472	4.7k	
R89	ERDS2TJ472	4.7k	
		(COILS)	
L1	PSLECCM011	COIL	
L2	PSLECC022	COIL	
L3	PSLECCM001	COIL	
L4	PSLECCM011	COIL	
L5	PSLEMGM001	COIL	
L6	PSLECCM002	COIL	
L7	PSLECCM011	COIL	
L8	PSLE04TB101K	COIL	
L10	PSLECCM011	COIL	
L11	PSLESA07230Q	COIL	
L12	PSLECA112019	COIL	
L13	PSLECA112019	COIL	
L14	PSLE04TB510M	COIL	
		(VARISTOR)	
SA1	PSVDMP362ME	VARISTOR (SUAGE ABSORBER)	
		(VARIABLE RESISTORS)	
VR1	EVNDXAA03B52	SEMI-FIXED RESISTOR	
VR2	EVNDXAA03B52	SEMI-FIXED RESISTOR	
		(PHOTO ELECTRIC TRANSDUCERS)	
PC1	PSVIKPC817	PHOTO COUPLER	
PC2	PSVIKPC817	PHOTO COUPLER	
		(FUSE)	
F2	PSBATEST396	FUSE	
		(VARISTORS)	
ZNR1	PSVDNR10D471	VARISTOR	
ZNR2	PSVDNR10D471	VARISTOR	
ZNR3	PSVDV151RA07	VARISTOR	
ZNR4	PSVDV151RA07	VARISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
		(THYRISTOR)	
SCR1	PSVDTYN058	THYRISTOR	
		(TRANSFORMER)	
T1	PSLTTSM001	TRANSFORMER	
		(THERMISTOR)	
TH1	PSRT5R114	THERMISTOR	
TH2	PSRT5R114	THERMISTOR	
		(CORES)	
B1	PSXCELBC4865	CORE	
B2	PSXCELBC4865	CORE	
B3	PSXCELBC3533	CORE	
B4	PSXCELBC3533	CORE	

16.8.2. Type-B

Ref. No.	Part No.	Part Name & Description	Remarks
200	PQQT4164Z	LABEL	
201	PQMC10053X	MAGNETIC SHIELD,COVER	⚠
202	PQMC10052X	MAGNETIC SHIELD,CASE	⚠
203	PQHR447Z	SPACER	
204	PQQT10469Z	LABEL	
205	PQHR10179Z	SPACER	
206	PQJS02R46Z	CONNECTOR,2P	⚠
207	PQJP04R07Y	CONNECTOR,4P	
208	PQJP3A3Z	CONNECTOR (SOCKET)	⚠
209	EST15304T	SWITCH	⚠
210	PQMH10027Z	ANGLE	⚠
211	PQJV3Z	HOLDER,FUSE	⚠
212	XBA2C25ND1L	FUSE	⚠
PCB7	PQWP6TD1232C	POWER SUPPLY BOARD ASS'Y (RTL)	
		(ICS)	
IC400	PQVISTK73904	IC	⚠
IC450	PQVISTK732C	IC	
IC451	PQVIHLD05003	IC	
IC452	PQVILA6500	IC	
		(TRANSISTORS)	
Q450	2SC4641	TRANSISTOR(SI)	
		(DIODES)	
D400	PQVDD5SB60	DIODE(SI)	⚠
D401	PQVDERD3805L	DIODE(SI)	⚠
D402	PQVDRD13FB	DIODE(SI)	
D450	PQVDRD6.2FB	DIODE(SI)	

Ref. No.	Part No.	Part Name & Description	Remarks
D451	PQVDC25P30F	DIODE(SI)	
D452	PQVDC25P30F	DIODE(SI)	
D453	MA4056	DIODE(SI)	⚠
D454	PQVDD10SC4M	DIODE(SI)	
D455	PQVDD10SC4M	DIODE(SI)	
		(CONNECTORS)	
CN400	PQJP2D98Z	CONNECTOR,2P	
CN401	PQJS07R50Z	CONNECTOR,7P	
CN402	PQJP4D30Z	CONNECTOR,4P	
CN403	PQJP4D46Z	CONNECTOR,4P	
		(CAPACITORS)	
C400	ECQU2A684MX	0.68	⚠
C401	ECKDKC472KB	0.0047	⚠
C402	ECKDKC472KB	0.0047	⚠
C403	ECKDKC472KB	0.0047	⚠
C404	ECKDKC332KB	0.0033	⚠S
C405	ECKWRS472ME	0.0047	⚠
C406	ECKWRS472ME	0.0047	⚠
C407	ECKDKC332KB	0.0033	⚠S
C408	EC0S2DB681BA	680p	⚠
C409	EC0S2DB681BA	680p	⚠
C410	ECKW3A151KB	150p	
C411	ECQE6224RJ	0.24	⚠
C412	ECQE10472KF	0.0047	⚠
C414	ECQB1H222JF	0.0022	
C415	ECQB1H392JF	0.0039	
C416	ECKZ3A101KB	100p	
C417	ECQV1H333JZ	0.033	
C450	ECA1VFG332	3300	
C452	ECQB1H102JF	0.001	S
C454	ECA1JFG102	1000	
C455	ECA1JFG102	1000	
C456	ECA1VFG331	330	
C457	ECEA1HGE010	1	
C458	ECA1JFG102	1000	
C459	ECQB1H102JF	0.001	S
C460	ECA1EFG102	1000	
C461	ECEA1HGE0R1	0.1	
C462	ECA1CFG102	1000	
C463	ECQV1H104JZ	0.1	
C464	ECEA1HGE100	10	
C465	ECQV1H104JZ	0.1	
C467	ECEA1EGE101	100	
C468	ECA1VFG101	100	

Ref. No.	Part No.	Part Name & Description	Remarks
		(RESISTORS)	
R401	ERDS2TJ474	470k	
R402	ERDS1TJ104	100k	
R403	ERG2SJ223	22k	
R404	ER016CKF1801	1.8k	
R405	ERF5TKR22M	0.22	
R406	ER016CKF4700	470	
R407	ER016CKF5110	511	
R408	ERG3SJ101	100	
R409	ERDS1TJ104	100k	
R450	ERDS2TJ222	2.2k	
R451	ERDS2TJ122	1.2k	
R453	ERDS2TJ562	5.6k	
R454	ERDS2TJ472	4.7k	
R455	ERG3SJ271	270	
R456	ERDS2TJ100	10	
R457	ERF5TLK75M	700k	
R458	ERDS2TJ272	2.7k	
R459	ERDS2TJ472	4.7k	
R460	PQRF2TLKR05	0.05	
R462	ERDS2TJ562	5.6k	
R463	ERDS2TJ472	4.7k	
R464	ERDS2TJ2R2	2.2	
R465	ERG2SJ101	100	
R466	ERDS2TJ390	39	
R467	ERDS2TJ102	1k	
R469	ER016CKF2561	2.56k	
R470	ER016CKF2701	2.7k	
R471	ER016CKF1522	15.2k	
		(COILS)	
L400	ELF18D850C	COIL	
L401	ELF18D450M	COIL	
L401	ELF18D450M	COIL	
L450	PQLE128	COIL	
L451	PQLE129	COIL	
L452	PQLE72	COIL	
L453	PQLE94	COIL	
L454	PQLE94	COIL	
L455	PQLE127	COIL	
		(VARISTOR)	
SA400	ERZC14DK271U	VARISTOR	⚠
		VARIABLE RESISTOR	
VR450	EVMF5SA00B23	SEMI-FIXED RESISTOR, 2k(B)	
VR451	EVMF5SA00B23	SEMI-FIXED RESISTOR, 2k(B)	
		(CONOPNEBT COMBINATIONS)	
CR400	PQVDMGC4R3R2	CR ARRAY	⚠

Ref. No.	Part No.	Part Name & Description	Remarks
CR401	PQVDMGC4R3R2	CR ARRAY	⚠
		(THYRISTOR)	
SCR450	PQVDTCSF5B41	THYRISTOR	
		(TRANSFORMERS)	
T400	ETS42AC111AC	TRANSFORMER	⚠
		(PHOTO ELECTRIC TRANSDUCER)	
PC400	PQVIPC817CD	PHOTO COUPLER	⚠
		(THERMISTOR)	
TH401	PQRTD0WFL5R0	THERMISTOR	⚠
		(FUSE)	
F450	XBA1C40NU100	FUSE	⚠

16.8.3. Type-C

Ref. No.	Part No.	Part Name & Description	Remarks
300	PSLP1009Z	POWER SUPPLY UNIT (RTL)	⚠

16.9. FIXTURES AND TOOL

Ref. No.	Part No.	Part Name & Description	Remarks
EC1	PQZZ64K2Z	EXTENSION CORD,64P	
EC2	PQZZ60K1Z	EXTENSION CORD,60P	
EC3	PQZZ50K2Z	EXTENSION CORD,50P	
		Note: **Extension cords are useful for servicing.(They make servicing easy.)**	

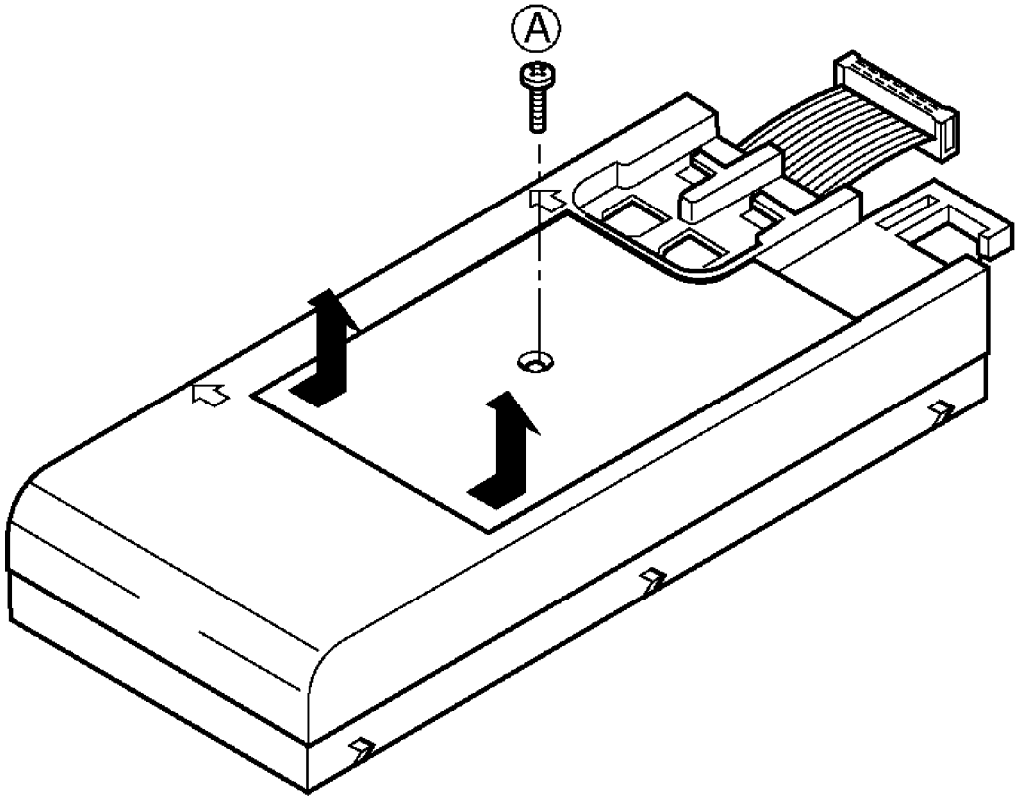
17. DISASSEMBLY INSTRUCTION (KX-TA123260)

17.1. HOW TO REMOVE THE COVER

Procedure 17.1.

1. Loosen the Screws (A).

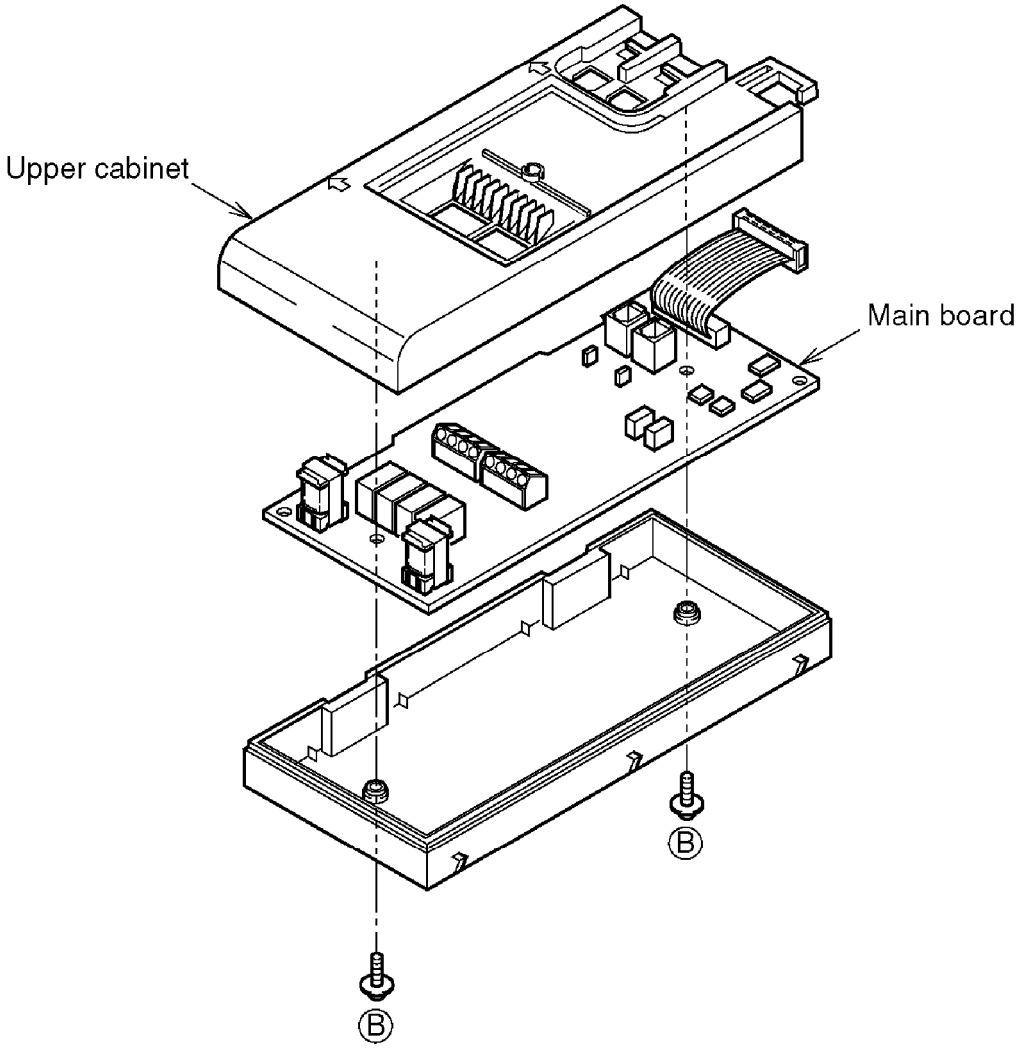
2. Slide the Cover in the direction of the arrow when removing it.



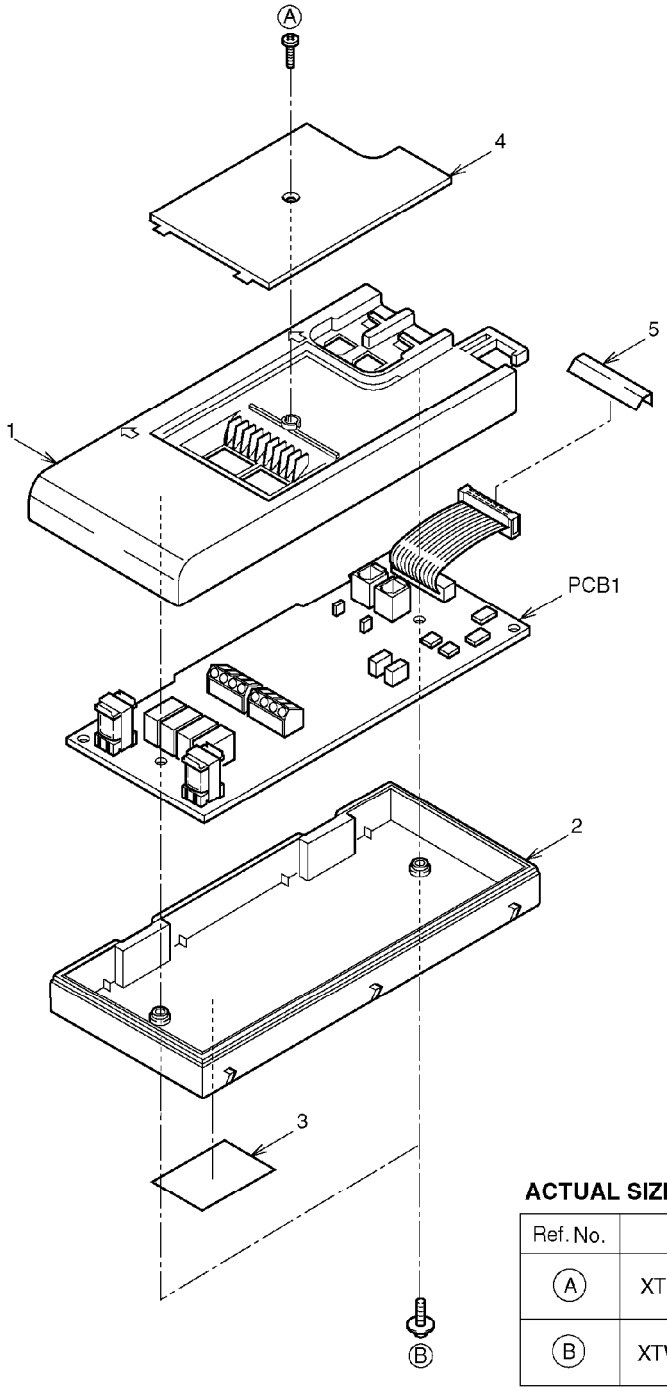
17.2. HOW TO REMOVE THE MAIN BOARD

Procedure 17.1. → 17.2.

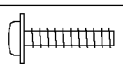
1. Remove the two Screws (B).
2. Remove the Upper Cabinet.
3. Remove the Main Board.



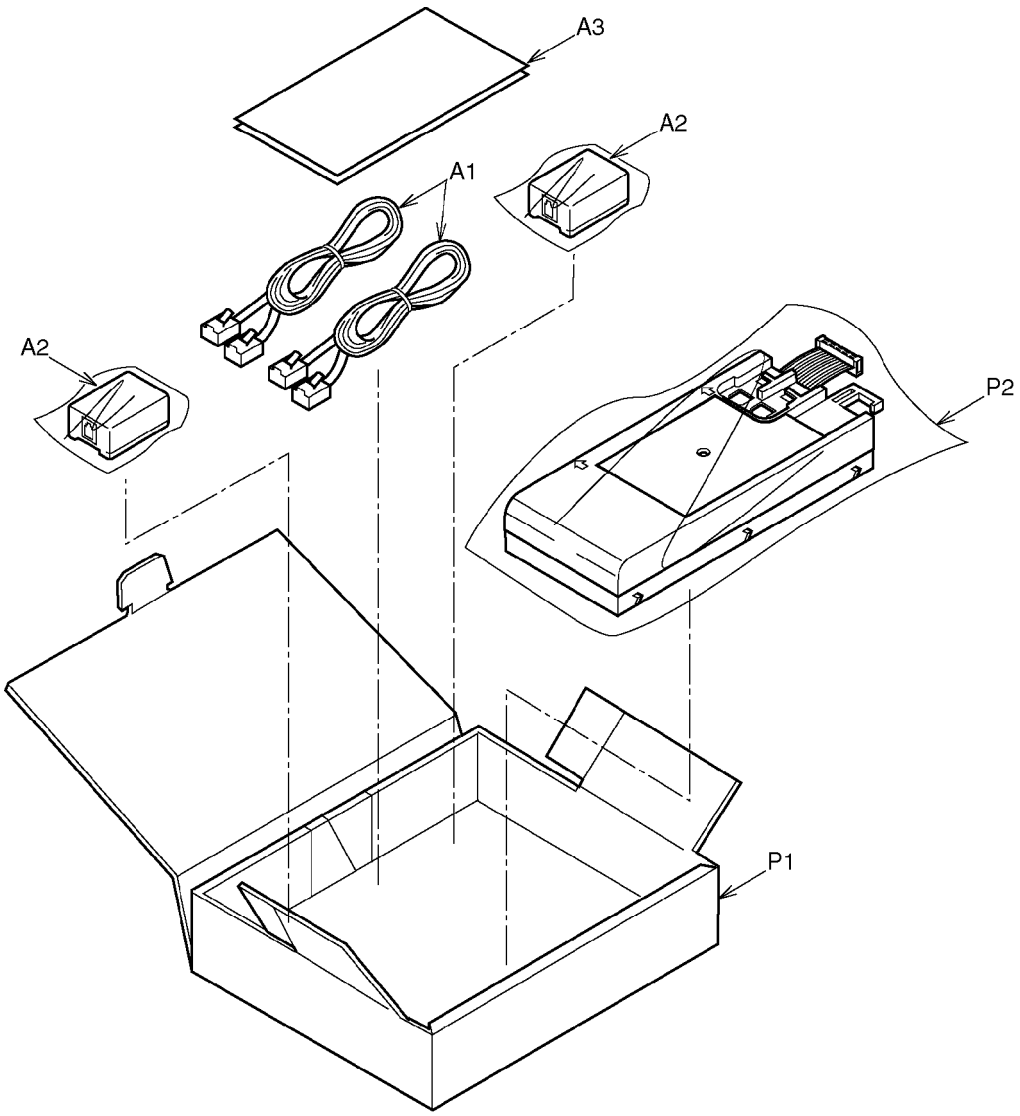
18. CABINET AND ELECTRICAL PARTS LOCATION (KX-TA123260)



ACTUAL SIZE OF SCREWS

Ref. No.	Part No.	Figure
Ⓐ	XTB3+12GFN	
Ⓑ	XTW3+S14P	

19. ACCESSORIES AND PACKING MATERIALS (KX-TA123260)



20. REPLACEMENT PARTS LIST (KX-TA123260)

Notes:

1. The marking (RTL) indicates that the Retention Time is limited for this item.
After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing parts and product retention.
After the end of this period, the assembly will no longer be available.

2. Important safety notice
Components identified by ⚠ mark have special characteristics

important for safety. When replacing any of these components, use only manufacture's specified parts.

3. The S mark indicates service standard parts and may differ from production parts.

4. RESISTORS & CAPACITORS
   Unless otherwise specified;
   All resistors are in ohms (Ω). k=1000 Ω , M=1000k Ω
   All capacitors are in MICRO FARADS (μ F). p= μ (μ F)
   *Type & Wattage of Resistor

Type

ERC:Solid ERD:Carbon PQ4R:Chip	ERX:Metal Film ERG:Metal Oxide ERO:Metal Film	PQRD:Carbon PQRQ:Fuse ERF:Wire Wound

Wattage

10,16,18:1/8W	14,25,S2:1/4W	12,50,S1:1/2W	1:1W	2:2W	5:5W

ECFD:Semi-Conductor ECQS:Styrol PQCBX,ECUV:Chip ECMS:Mica	ECCD,ECKD,PQCBC,PQVP : Ceramic ECQM,ECQV,ECQE,ECQU,ECQB : Polyester ECEA,ECSZ,ECOS : Electrolytic ECQP : Polypropylene

Voltage

ECQ Type	ECQG ECQV Type	ECSZ Type	Others	
1H : 50V 2A : 100V 2E : 250V 2H : 500V	05 : 50V 1 : 100V 2 : 200V	OF : 3.15V 1A : 10V 1V : 35V OJ : 6.3V	OJ : 6.3V 1A : 10V 1C : 16V 1E,25 : 25V	1V : 35V 50,1H : 50V 1J : 63V 2A : 100V

20.1. CABINET AND ELECTRICAL PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
1	PSKF1062Z1	UPPER CABINET	S
2	PSKM1093Z1	LOWER CABINET	S
3	PSGT2162Z	NAME PLATE	
4	PSKV1022Z1	COVER	S
5	PQHX10427Z	PVC SHEET	

20.2. ACCESSORIES AND PACKING MATERIALS

Ref. No.	Part No.	Part Name & Description	Remarks
A1	PQJA48W	CORD, TELEPHONE CODE	
A2	PQJS1T30Z	TERMINAL BOX	
A3	PSQX2485Z	INSTRUCTION BOOK	
P1	PQPK10180Y	GIFT BOX	
P2	XZB12X27A04	PROTECTION COVER	

20.3. MAIN BOARD PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
PCB1	PSWPA123260M	MAIN BOARD ASS'Y (RTL)	
		(ICS)	
IC1	PQVINJM4558M	IC	S
IC2	PQVINJM4558M	IC	S
IC3A	PSVIMC14548V	IC	S
IC3C	PSVIMC14548V	IC	S
IC4	PQVISN7L174N	IC	S
IC5	PQVISN7L174N	IC	S
IC6	PQVISN7L365S	IC	
IC7	PQVISN7L365S	IC	
IC8	PQVITC7W00FL	IC	
IC9	PQVISN7L174N	IC	S
IC10	PQVISN7L138M	IC	
IC11	PQVISN7L32S	IC	
		(TRANSISTORS)	
Q1A	2SC4081S	TRANSISTOR(SI)	
Q1B	2SC4081S	TRANSISTOR(SI)	
Q1C	2SC4081S	TRANSISTOR(SI)	
Q1D	2SC4081S	TRANSISTOR(SI)	
Q2A	UN521DTX	TRANSISTOR(SI)	
Q2B	UN521DTX	TRANSISTOR(SI)	
Q2C	UN521DTX	TRANSISTOR(SI)	
Q2D	UN521DTX	TRANSISTOR(SI)	
Q3A	UN5113	TRANSISTOR(SI)	S
Q3C	UN5113	TRANSISTOR(SI)	S
Q4A	UN5213	TRANSISTOR(SI)	S
Q4C	UN5213	TRANSISTOR(SI)	S
Q5A	2SC4081S	TRANSISTOR(SI)	
Q5C	2SC4081S	TRANSISTOR(SI)	
Q6A	2SA1576S	TRANSISTOR(SI)	
Q6C	2SA1576S	TRANSISTOR(SI)	
Q7A	PQVTDTC143E	TRANSISTOR(SI)	
Q7C	PQVTDTC143E	TRANSISTOR(SI)	
Q8A	PQVTDTC143E	TRANSISTOR(SI)	
Q8B	PQVTDTC143E	TRANSISTOR(SI)	
Q8C	PQVTDTC143E	TRANSISTOR(SI)	
Q8D	PQVTDTC143E	TRANSISTOR(SI)	
		(DIODES)	
D1A	PSVDUDZ68B	DIODE(SI)	
D1C	PSVDUDZ68B	DIODE(SI)	
D2A	MA110	DIODE(SI)	
D2C	MA110	DIODE(SI)	
D3A	MA110	DIODE(SI)	
D3B	MA110	DIODE(SI)	
D3C	MA110	DIODE(SI)	
D3D	MA110	DIODE(SI)	
		(CONNECTOR , JACKS AND TERMINALS)	
CN1	PQJS20R15Y	CONNECTOR,20P	
CN2	PQJT976Z	TERMINAL	

Ref. No.	Part No.	Part Name & Description	Remarks
CN3	PSJJ1T011Z	JACK	
CN4	PSJJ1T011Z	JACK	
CN5	PQJT976Z	TERMINAL	
		(CAPACITORS)	
C1A	PSCEV1CA470	47	
C1C	PSCEV1CA470	47	
C2A	PSCEV1HS010	1	
C2C	PSCEV1HS010	1	
C3A	ECUV1E223KBV	0.022	
C3C	ECUV1E223KBV	0.022	
C4A	ECUV1H271JCV	270p	
C4C	ECUV1H271JCV	270p	
C5A	ECUV1E223KBV	0.022	
C5C	ECUV1E223KBV	0.022	
C6A	ECUV1E223KBV	0.022	
C6C	ECUV1E223KBV	0.022	
C7A	PQCUV1H563KB	0.056	
C7C	PQCUV1H563KB	0.056	
C8A	PSCEV1CS4R7S	4.7	
C8B	PSCEV1CS4R7S	4.7	
C8C	PSCEV1CS4R7S	4.7	
C8D	PSCEV1CS4R7S	4.7	
C9A	PSCUV2EY104K	0.1	
C9B	PSCUV2EY104K	0.1	
C9C	PSCUV2EY104K	0.1	
C9D	PSCUV2EY104K	0.1	
C10A	ECUV1H102KBV	0.001	
C10C	ECUV1H102KBV	0.001	
C11A	ECUV1H223KBV	0.022	S
C11C	ECUV1H223KBV	0.022	S
C12A	ECUV1H223KBV	0.022	S
C12C	ECUV1H223KBV	0.022	S
C13	ECUV1C104ZFV	0.1	
C15	ECUV1C104ZFV	0.1	
C17	ECUV1C104ZFV	0.1	
C21	ECUV1C104ZFV	0.1	
C22	ECUV1C104ZFV	0.1	
C23	ECUV1C104ZFV	0.1	
		(RESISTORS)	
R1A	ERJ3GEYJ223	22k	
R1B	ERJ3GEYJ223	22k	
R1C	ERJ3GEYJ223	22k	
R1D	ERJ3GEYJ223	22k	
R2A	ERJ3GEYJ224	220k	
R2B	ERJ3GEYJ224	220k	
R2C	ERJ3GEYJ224	220k	
R2D	ERJ3GEYJ224	220k	
R3A	ERJ3GEYJ182	1.8k	
R3C	ERJ3GEYJ182	1.8k	
R4A	ERJ3GEYJ473	47k	

Ref. No.	Part No.	Part Name & Description	Remarks
R4C	ERJ3GEYJ473	47k	
R5A	ERJ3GEYJ564	560k	
R5C	ERJ3GEYJ564	560k	
R6A	ERJ3GEYJ104	100k	
R6C	ERJ3GEYJ104	100k	
R7A	ERJ3GEYJ224	220k	
R7C	ERJ3GEYJ224	220k	
R8A	ERJ3GEYJ104	100k	
R8C	ERJ3GEYJ104	100k	
R9A	ERJ3GEYJ104	100k	
R9C	ERJ3GEYJ104	100k	
R10A	ERJ3GEYJ334	330k	
R10C	ERJ3GEYJ334	330k	
R11A	ERJ3GEYJ563	56k	
R11C	ERJ3GEYJ563	56k	
R12A	ERJ3GEYJ103	10k	
R12B	ERJ3GEYJ103	10k	
R12C	ERJ3GEYJ103	10k	
R12D	ERJ3GEYJ103	10k	
R13A	ERJ3GEYJ103	10k	
R13B	ERJ3GEYJ103	10k	
R13C	ERJ3GEYJ103	10k	
R13D	ERJ3GEYJ103	10k	
R14A	ERJ3GEYJ103	10k	
R14B	ERJ3GEYJ103	10k	
R14C	ERJ3GEYJ103	10k	
R14D	ERJ3GEYJ103	10k	
R15A	ERJ3GEYF1580	158	
R15C	ERJ3GEYF1580	158	
R16A	ERJ14YJ621	620	
R16C	ERJ14YJ621	620	
R17A	ERJ14YJ151	150	
R17B	ERJ14YJ151	150	
R17C	ERJ14YJ151	150	
R17D	ERJ14YJ151	150	
R18A	ERJ3GEYJ184	180k	
R18C	ERJ3GEYJ184	180k	
R20	ERJ3GEYJ102	1k	
R21	ERJ3GEYJ102	1k	
R22	ERJ3GEYJ102	1k	
R23	ERJ3GEY0R00	0	
R24	ERJ3GEYJ102	1k	
R25	ERJ3GEYJ102	1k	
		(COILS)	
L1A	PQLE106	COIL	
L1B	PQLE106	COIL	
L1C	PQLE106	COIL	
L1D	PQLE106	COIL	
L2A	PQLE106	COIL	
L2C	PQLE106	COIL	

Ref. No.	Part No.	Part Name & Description	Remarks
		(RELAIES)	
RLY1A	PQSL63Z	RELAY	S
RLY1C	PQSL63Z	RELAY	S
RLY2A	PSSLJV12KTZ	RELAY	
RLY2B	PSSLJV12KTZ	RELAY	
RLY2C	PSSLJV12KTZ	RELAY	
RLY2D	PSSLJV12KTZ	RELAY	
		(TRANSFORMERS)	
T1A	PSLT8D7A	TRANSFORMER	S
T1C	PSLT8D7A	TRANSFORMER	S
		(VARISTORS)	
ZNR1A	PQVDNV039D03	VARISTOR	S
ZNR1B	PQVDNV039D03	VARISTOR	S
ZNR1C	PQVDNV039D03	VARISTOR	S
ZNR1D	PQVDNV039D03	VARISTOR	S
		(FILTER)	
FLT1	PQVFTU50MT	CERAMIC FILTER	

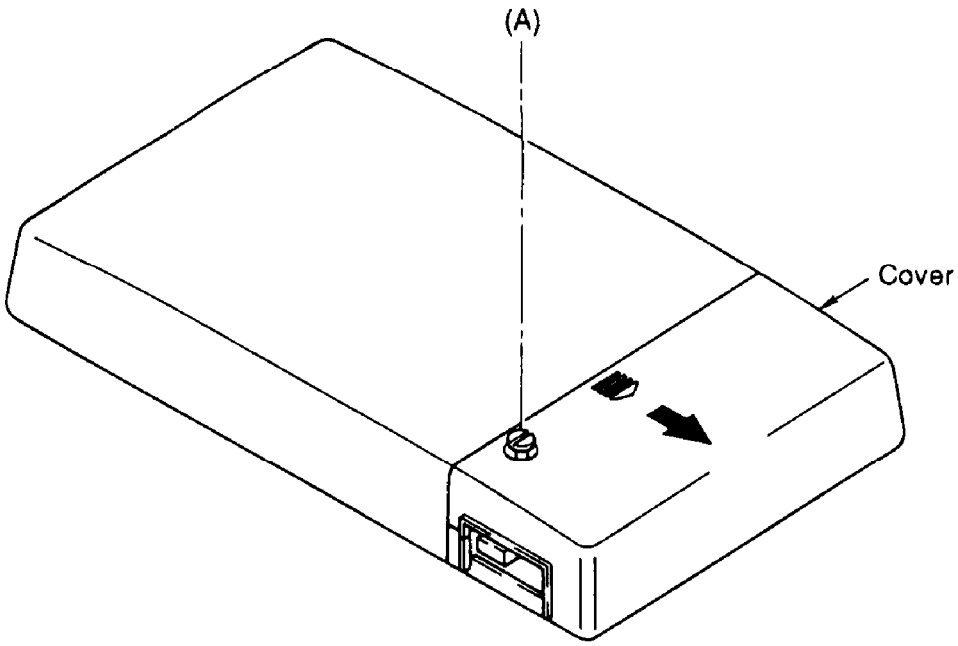
21. DISASSEMBLY INSTRUCTION (KX-TA123270)

21.1. HOW TO REMOVE THE COVER

Procedure 21.1.

1. Remove the Screws (A).

2. Slide the Cover in the direction of the arrow when removing it.

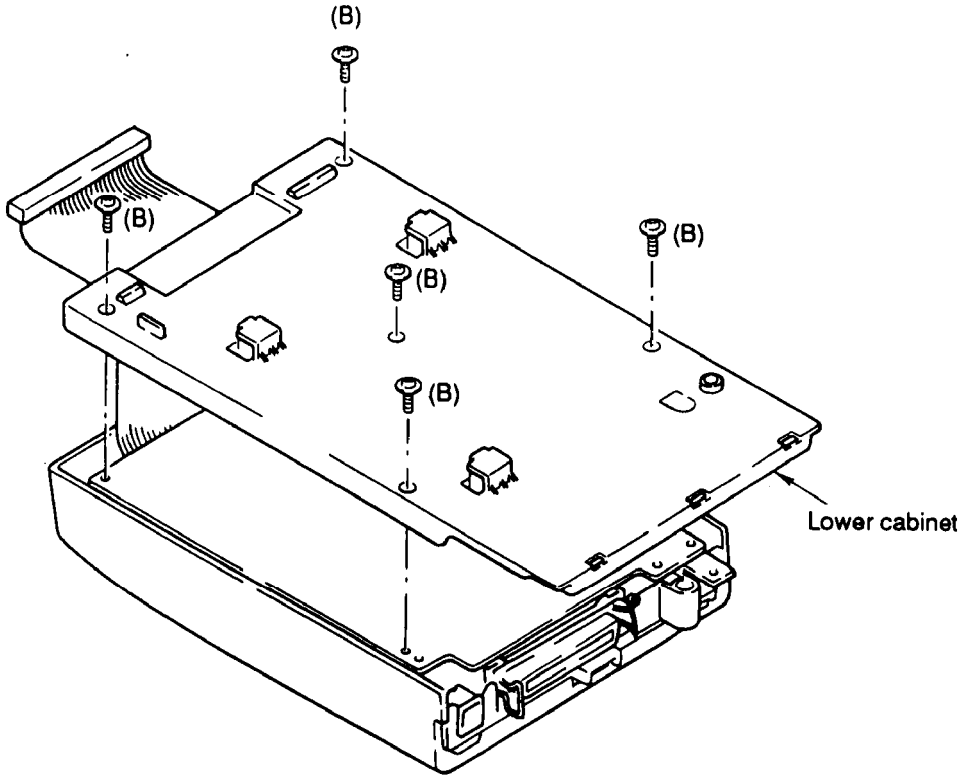


21.2. HOW TO REMOVE THE LOWER CABINET

Procedure 21.1. → 21.2.

1. Remove the five Screws (B).

2. Remove the Lower Cabinet.

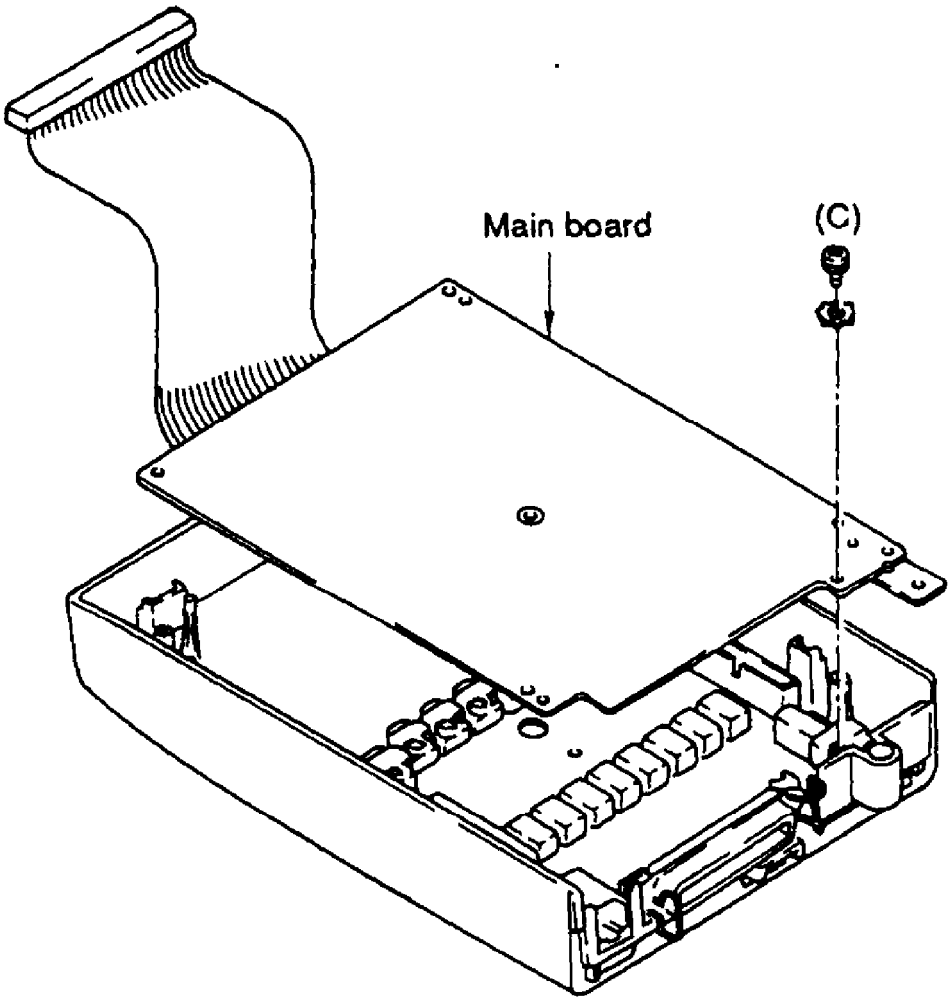


21.3. HOW TO REMOVE THE MAIN BOARD

Procedure 21.1. → 21.2. → 21.3.

1. Remove the Screws (C).

2. Remove the Main Board.

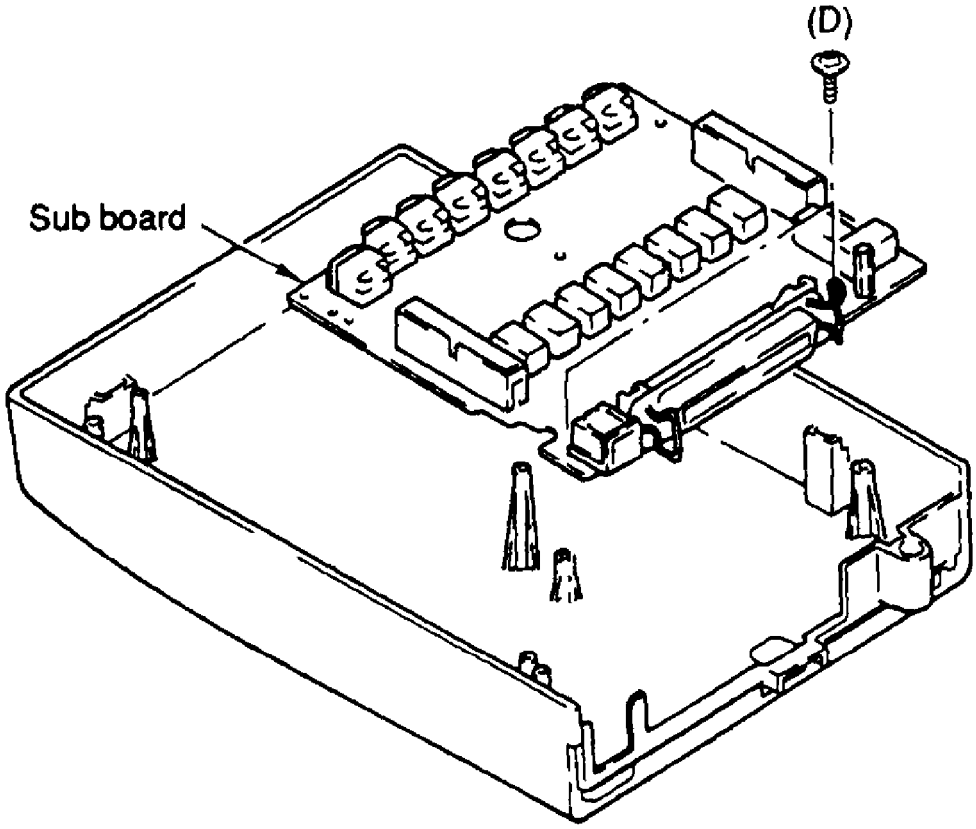


21.4. HOW TO REMOVE THE SUB BOARD

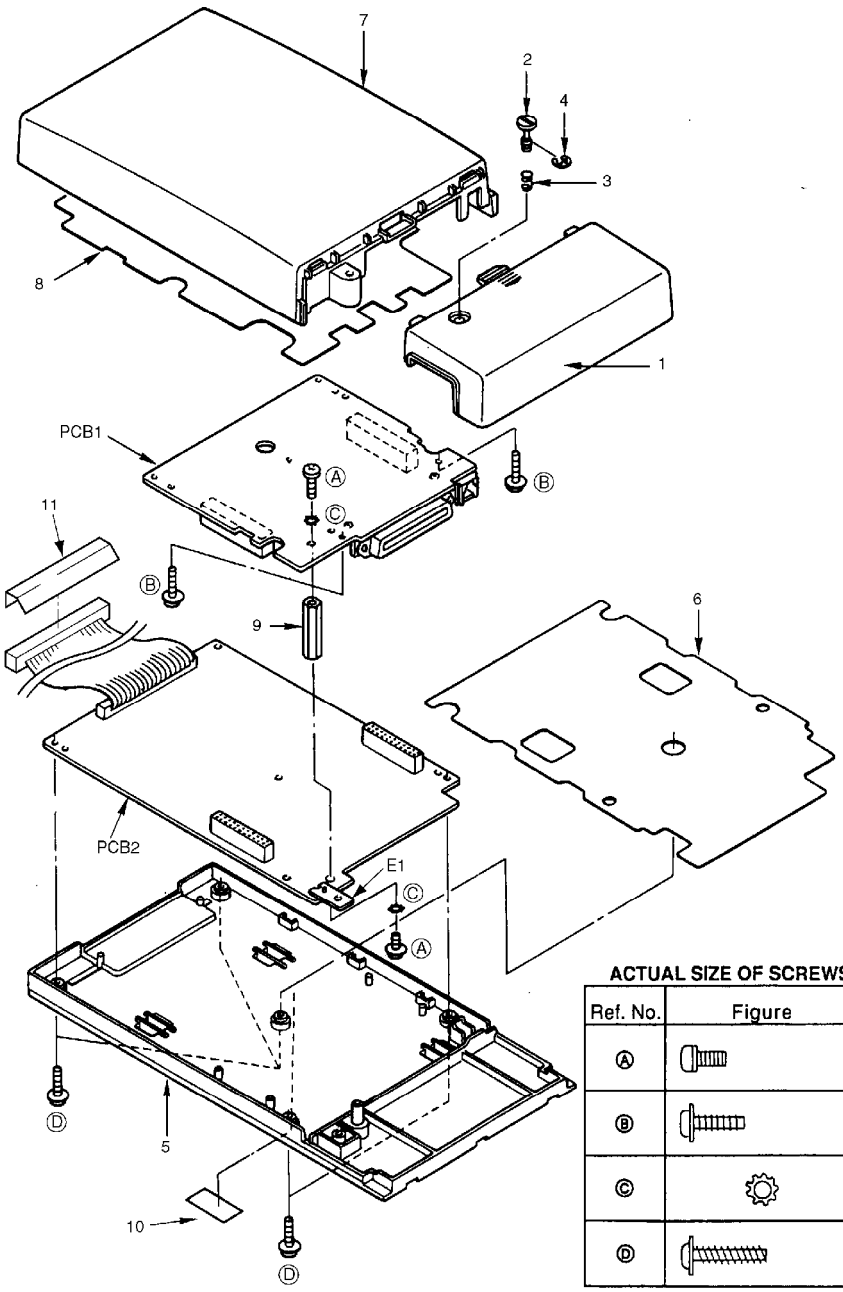
Procedure 21.1. → 21.2. → 21.3. → 21.4.

1. Remove the two Screws (D).

2. Remove the Sub Board.



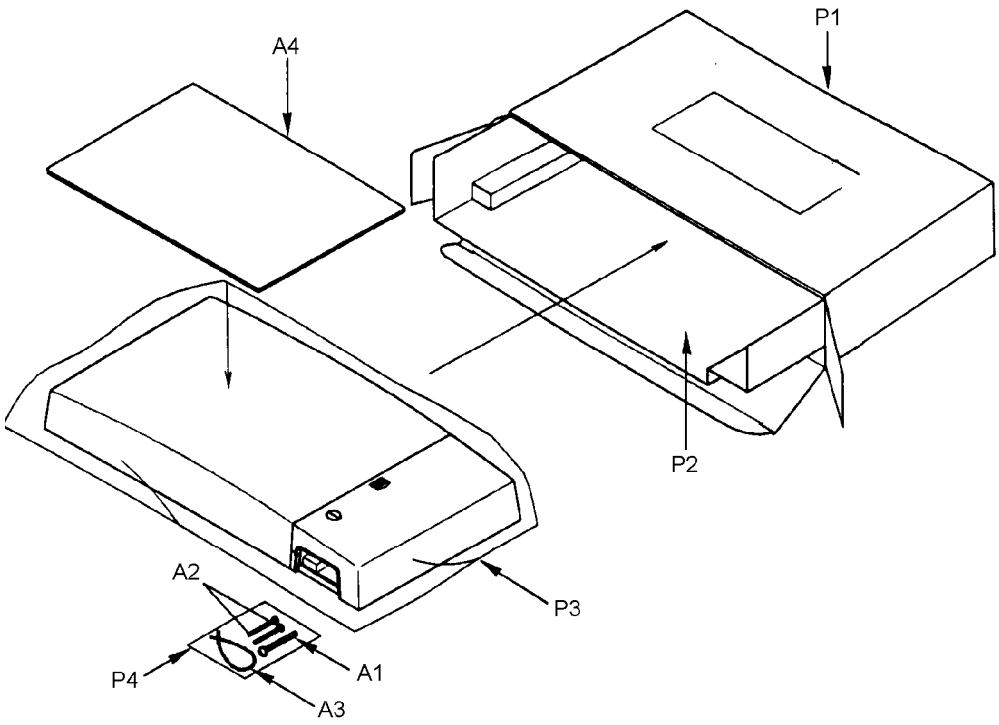
22. CABINET AND ELECTRICAL PARTS LOCATION (KX-TA123270)



ACTUAL SIZE OF SCREWS

Ref. No.	Figure	Part No.
Ⓐ		XYN3+C6
Ⓑ		XTW3+S10P
Ⓒ		XWC3B
Ⓓ		XTW3+S14P

23. ACCESSORIES AND PACKING MATERIALS (KX-TA123270)



24. REPLACEMENT PARTS LIST (KX-TA123270)

Notes:

1. **The marking (RTL) indicates that the Retention Time is limited for this item.**
   After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing parts and product retention.
   After the end of this period, the assembly will no longer be available.
2. **Important safety notice**
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.
3. **The S mark indicates service standard parts and may differ from production parts.**
4. **RESISTORS & CAPACITORS**

Unless otherwise specified;
All resistors are in ohms (Ω). k=1000 Ω , M=1000k Ω
All capacitors are in MICRO FARADS (μ F). p= μ (μ F)
***Type & Wattage of Resistor**

Type

ERC:Solid ERD:Carbon PQ4R:Chip	ERX:Metal Film ERG:Metal Oxide ERO:Metal Film	PQRD:Carbon PQRQ:Fuse ERF:Wire Wound

Wattage

10,16,18:1/8W	14,25,S2:1/4W	12,50,S1:1/2W	1:1W	2:2W	5:5W

ECFD:Semi-Conductor ECQS:Styrol PQCBX,ECUV:Chip ECMS:Mica	ECCD,ECKD,PQCBC,PQVP : Ceramic ECQM,ECQV,ECQE,ECQU,ECQB : Polyester ECEA,ECSZ,ECOS : Electrolytic ECQP : Polypropylene

Voltage

ECQ Type	ECQG ECQV Type	ECSZ Type	Others	
1H : 50V 2A : 100V 2E : 250V 2H : 500V	05 : 50V 1 : 100V 2 : 200V	OF : 3.15V 1A : 10V 1V : 35V OJ : 6.3V	OJ : 6.3V 1A : 10V 1C : 16V 1E,25 : 25V	1V : 35V 50,1H : 50V 1J : 63V 2A : 100V

24.1. CABINET AND ELECTRICAL PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
1	PQKV10007Z1	COVER	
2	PQHD10011Z	SCREW	
3	PQUS141Z	SPRING	
4	XUC3VW	RETAINING RING	
5	PQKF10026Z1	LOWER CABINET	
6	PQMC10066Y	MAGNETIC SHIELD	
7	PQKM10029V1	CABINET BODY	
8	PQMC10065Z	MAGNETIC SHIELD	
9	PQHE10035Z	SPACER	
10	PSGT2163Z	NAME PLATE	
11	PQHX10426Z	PVC SHEET	

24.2. ACCESSORIES AND PACKING MATERIALS

Ref. No.	Part No.	Part Name & Description	Remarks
A1	XYN4+C35FN	SCREW WITH WASHER	
A2	XSN4X40+28FY	SCREW	
A3	PQHR133Z	BAND	
A4	PSQX2485Z	INSTRUCTION BOOK	
P1	PQPK10118Z	GIFT BOX	
P2	PQPD10027Z	CUSHION	
P3	PQPP10047Z	PROTECTION COVER (FOR SET)	
P4	XZB05X08A03	PROTECTION COVER (FOR ACCESSORIES)	

24.3. MAIN BOARD PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
PCB1	PSWP1123270M	MAIN BOARD ASS'Y (RTL)	
		(ICS)	
IC201A	PSVIMC14548V	IC	S
IC201B	PSVIMC14548V	IC	S
IC201C	PSVIMC14548V	IC	S
IC201D	PSVIMC14548V	IC	S
IC201E	PSVIMC14548V	IC	S
IC201F	PSVIMC14548V	IC	S
IC201G	PSVIMC14548V	IC	S
IC201H	PSVIMC14548V	IC	S
IC203A	PQVINJM319V	IC	
IC203B	PQVINJM319V	IC	
IC203C	PQVINJM319V	IC	
IC203D	PQVINJM319V	IC	
IC203E	PQVINJM319V	IC	
IC203F	PQVINJM319V	IC	
IC203G	PQVINJM319V	IC	
IC203H	PQVINJM319V	IC	
IC211	PQVIMB246168	IC	S
IC215	PQVICM8870FI	IC	S
IC216	PQVICM8870FI	IC	S
IC217	PQVIMC4051BF	IC	S
IC218	PQVIMC4051BF	IC	S
IC219	PQVISN7L14S	IC	S
IC220	PQVISN7L14S	IC	S
IC221	PQVISN7L14S	IC	S
IC222	PQVISN7L365S	IC	
IC223	PQVISN7L86S	IC	
IC224	PQVISN7L640M	IC	
IC225	PQVISN7L125S	IC	S
IC226	PQVISN7L02ML	IC	S
IC227	PQVISN7L74S	IC	
		(TRANSISTORS)	
Q201A	2SA1576R	TRANSISTOR(SI)	
Q201B	2SA1576R	TRANSISTOR(SI)	
Q201C	2SA1576R	TRANSISTOR(SI)	
Q201D	2SA1576R	TRANSISTOR(SI)	
Q201E	2SA1576R	TRANSISTOR(SI)	
Q201F	2SA1576R	TRANSISTOR(SI)	
Q201G	2SA1576R	TRANSISTOR(SI)	
Q201H	2SA1576R	TRANSISTOR(SI)	
Q203A	2SB1322	TRANSISTOR(SI)	
Q203B	2SB1322	TRANSISTOR(SI)	
Q203C	2SB1322	TRANSISTOR(SI)	
Q203D	2SB1322	TRANSISTOR(SI)	
Q203E	2SB1322	TRANSISTOR(SI)	
Q203F	2SB1322	TRANSISTOR(SI)	
Q203G	2SB1322	TRANSISTOR(SI)	
Q203H	2SB1322	TRANSISTOR(SI)	
Q204A	2SD1994A	TRANSISTOR(SI)	

Ref. No.	Part No.	Part Name & Description	Remarks
Q204B	2SD1994A	TRANSISTOR(SI)	
Q204C	2SD1994A	TRANSISTOR(SI)	
Q204D	2SD1994A	TRANSISTOR(SI)	
Q204E	2SD1994A	TRANSISTOR(SI)	
Q204F	2SD1994A	TRANSISTOR(SI)	
Q204G	2SD1994A	TRANSISTOR(SI)	
Q204H	2SD1994A	TRANSISTOR(SI)	
Q205A	2SC4081R	TRANSISTOR(SI)	
Q205B	2SC4081R	TRANSISTOR(SI)	
Q205C	2SC4081R	TRANSISTOR(SI)	
Q205D	2SC4081R	TRANSISTOR(SI)	
Q205E	2SC4081R	TRANSISTOR(SI)	
Q205F	2SC4081R	TRANSISTOR(SI)	
Q205G	2SC4081R	TRANSISTOR(SI)	
Q205H	2SC4081R	TRANSISTOR(SI)	
Q206A	2SC4081R	TRANSISTOR(SI)	
Q206B	2SC4081R	TRANSISTOR(SI)	
Q206C	2SC4081R	TRANSISTOR(SI)	
Q206D	2SC4081R	TRANSISTOR(SI)	
Q206E	2SC4081R	TRANSISTOR(SI)	
Q206F	2SC4081R	TRANSISTOR(SI)	
Q206G	2SC4081R	TRANSISTOR(SI)	
Q206H	2SC4081R	TRANSISTOR(SI)	
Q208A	2SA1576R	TRANSISTOR(SI)	
Q208B	2SA1576R	TRANSISTOR(SI)	
Q208C	2SA1576R	TRANSISTOR(SI)	
Q208D	2SA1576R	TRANSISTOR(SI)	
Q208E	2SA1576R	TRANSISTOR(SI)	
Q208F	2SA1576R	TRANSISTOR(SI)	
Q208G	2SA1576R	TRANSISTOR(SI)	
Q208H	2SA1576R	TRANSISTOR(SI)	
Q210	2SD2137	TRANSISTOR(SI)	
Q211	UN5113	TRANSISTOR(SI)	S
Q213	2SC4081R	TRANSISTOR(SI)	
Q214	UN5213	TRANSISTOR(SI)	S
Q215	2SB1417P	TRANSISTOR(SI)	
Q251	2SB1237R	TRANSISTOR(SI)	
Q252	UN5113	TRANSISTOR(SI)	S
Q300A	2SA1576Q	TRANSISTOR(SI)	
Q300B	2SA1576Q	TRANSISTOR(SI)	
Q300C	2SA1576Q	TRANSISTOR(SI)	
Q300D	2SA1576Q	TRANSISTOR(SI)	
Q300E	2SA1576Q	TRANSISTOR(SI)	
Q300F	2SA1576Q	TRANSISTOR(SI)	
Q300G	2SA1576Q	TRANSISTOR(SI)	
Q300H	2SA1576Q	TRANSISTOR(SI)	
Q301A	2SC4081Q	TRANSISTOR(SI)	
Q301B	2SC4081Q	TRANSISTOR(SI)	
Q301C	2SC4081Q	TRANSISTOR(SI)	
Q301D	2SC4081Q	TRANSISTOR(SI)	
Q301E	2SC4081Q	TRANSISTOR(SI)	

Ref. No.	Part No.	Part Name & Description	Remarks
Q301F	2SC4081Q	TRANSISTOR(SI)	
Q301G	2SC4081Q	TRANSISTOR(SI)	
Q301H	2SC4081Q	TRANSISTOR(SI)	
		(DIODES)	
D210A	RLS71	DIODE(SI)	
D210B	RLS71	DIODE(SI)	
D210C	RLS71	DIODE(SI)	
D210D	RLS71	DIODE(SI)	
D210E	RLS71	DIODE(SI)	
D210F	RLS71	DIODE(SI)	
D210G	RLS71	DIODE(SI)	
D210H	RLS71	DIODE(SI)	
D211A	MA4039	DIODE(SI)	
D211B	MA4039	DIODE(SI)	
D211C	MA4039	DIODE(SI)	
D211D	MA4039	DIODE(SI)	
D211E	MA4039	DIODE(SI)	
D211F	MA4039	DIODE(SI)	
D211G	MA4039	DIODE(SI)	
D211H	MA4039	DIODE(SI)	
D212A	MA151WK	DIODE(SI)	S
D212B	MA151WK	DIODE(SI)	S
D212C	MA151WK	DIODE(SI)	S
D212D	MA151WK	DIODE(SI)	S
D212E	MA151WK	DIODE(SI)	S
D212F	MA151WK	DIODE(SI)	S
D212G	MA151WK	DIODE(SI)	S
D212H	MA151WK	DIODE(SI)	S
D213A	1SS181	DIODE(SI)	
D213B	1SS181	DIODE(SI)	
D213C	1SS181	DIODE(SI)	
D213D	1SS181	DIODE(SI)	
D213E	1SS181	DIODE(SI)	
D213F	1SS181	DIODE(SI)	
D213G	1SS181	DIODE(SI)	
D213H	1SS181	DIODE(SI)	
D220	RLS71	DIODE(SI)	
D221	RLS71	DIODE(SI)	
D223	RLS71	DIODE(SI)	
D251	MA4056	DIODE(SI)	
D252	RLS71	DIODE(SI)	
		(CONNECTORS)	
CN201	PQJS60R96Z	CONNECTOR,60P	
CN205	PQJS34X33Y	CONNECTOR,34P	
CN206	PQJS34X33Y	CONNECTOR,34P	
		(CAPACITORS)	
C202A	ECEA1HKS2R2	2.2	
C202B	ECEA1HKS2R2	2.2	
C202C	ECEA1HKS2R2	2.2	

Ref. No.	Part No.	Part Name & Description	Remarks
C202D	ECEA1HKS2R2	2.2	
C202E	ECEA1HKS2R2	2.2	
C202F	ECEA1HKS2R2	2.2	
C202G	ECEA1HKS2R2	2.2	
C202H	ECEA1HKS2R2	2.2	
C204A	ECEA1HKS100	10	S
C204B	ECEA1HKS100	10	S
C204C	ECEA1HKS100	10	S
C204D	ECEA1HKS100	10	S
C204E	ECEA1HU100	10	
C204F	ECEA1HU100	10	
C204G	ECEA1HU100	10	
C204H	ECEA1HU100	10	
C205A	ECEA1EN100S	10	
C205B	ECEA1EN100S	10	
C205C	ECEA1EN100S	10	
C205D	ECEA1EN100S	10	
C205E	ECEA1EN100S	10	
C205F	ECEA1EN100S	10	
C205G	ECEA1EN100S	10	
C205H	ECEA1EN100S	10	
C206A	ECEA1EN100S	10	
C206B	ECEA1EN100S	10	
C206C	ECEA1EN100S	10	
C206D	ECEA1EN100S	10	
C206E	ECEA1EN100S	10	
C206F	ECEA1EN100S	10	
C206G	ECEA1EN100S	10	
C206H	ECEA1EN100S	10	
C207A	PQ4R10XJ000	0	
C207B	PQ4R10XJ000	0	
C207C	PQ4R10XJ000	0	
C207D	PQ4R10XJ000	0	
C207E	PQ4R10XJ000	0	
C207F	PQ4R10XJ000	0	
C207G	PQ4R10XJ000	0	
C207H	PQ4R10XJ000	0	
C208A	PQ4R10XJ000	0	
C208B	PQ4R10XJ000	0	
C208C	PQ4R10XJ000	0	
C208D	PQ4R10XJ000	0	
C208E	PQ4R10XJ000	0	
C208F	PQ4R10XJ000	0	
C208G	PQ4R10XJ000	0	
C208H	PQ4R10XJ000	0	
C209A	PQCUV1H223KB	0.022	S
C209B	PQCUV1H223KB	0.022	S
C209C	PQCUV1H223KB	0.022	S
C209D	PQCUV1H223KB	0.022	S
C209E	PQCUV1H223KB	0.022	S
C209G	PQCUV1H223KB	0.022	S
C209H	PQCUV1H223KB	0.022	S
C210A	PQCUV1H223KB	0.022	S

Ref. No.	Part No.	Part Name & Description	Remarks
C210B	PQCUV1H223KB	0.022	S
C210C	PQCUV1H223KB	0.022	S
C210D	PQCUV1H223KB	0.022	S
C210E	PQCUV1H223KB	0.022	S
C210F	PQCUV1H223KB	0.022	S
C210G	PQCUV1H223KB	0.022	S
C210H	PQCUV1H223KB	0.022	S
C211A	ECEA1HN4R7S	4.7	S
C211B	ECEA1HN4R7S	4.7	S
C211C	ECEA1HN4R7S	4.7	S
C211D	ECEA1HN4R7S	4.7	S
C211E	ECEA1HN4R7S	4.7	S
C211F	ECEA1HN4R7S	4.7	S
C211G	ECEA1HN4R7S	4.7	S
C211H	ECEA1HN4R7S	4.7	S
C212A	PQCUV1H103KB	0.01	S
C212B	PQCUV1H103KB	0.01	S
C212C	PQCUV1H103KB	0.01	S
C212D	PQCUV1H103KB	0.01	S
C212E	PQCUV1H103KB	0.01	S
C212F	PQCUV1H103KB	0.01	S
C212G	PQCUV1H103KB	0.01	S
C212H	PQCUV1H103KB	0.01	S
C213A	PQCUV1H103KB	0.01	S
C213B	PQCUV1H103KB	0.01	S
C213C	PQCUV1H103KB	0.01	S
C213D	PQCUV1H103KB	0.01	S
C213E	PQCUV1H103KB	0.01	S
C213F	PQCUV1H103KB	0.01	S
C213G	PQCUV1H103KB	0.01	S
C213H	PQCUV1H103KB	0.01	S
C216A	ECEA1HKS2R2	2.2	
C216B	ECEA1HKS2R2	2.2	
C216C	ECEA1HKS2R2	2.2	
C216D	ECEA1HKS2R2	2.2	
C216E	ECEA1HKS2R2	2.2	
C216F	ECEA1HKS2R2	2.2	
C216G	ECEA1HKS2R2	2.2	
C216H	ECEA1HKS2R2	2.2	
C217A	PQCUV1H680JC	68p	
C217B	PQCUV1H680JC	68p	
C217C	PQCUV1H680JC	68p	
C217D	PQCUV1H680JC	68p	
C217E	PQCUV1H680JC	68p	
C217F	PQCUV1H680JC	68p	
C217G	PQCUV1H680JC	68p	
C217H	PQCUV1H680JC	68p	
C218A	PQCUV1H680JC	68p	
C218B	PQCUV1H680JC	68p	
C218C	PQCUV1H680JC	68p	
C218D	PQCUV1H680JC	68p	
C218E	PQCUV1H680JC	68p	
C218F	PQCUV1H680JC	68p	
C218G	PQCUV1H680JC	68p	

Ref. No.	Part No.	Part Name & Description	Remarks
C218H	PQCUV1H680JC	68p	
C219A	ECUV1H104MD	0.1	S
C219B	ECUV1H104MD	0.1	S
C219C	ECUV1H104MD	0.1	S
C219D	ECUV1H104MD	0.1	S
C219E	ECUV1H104MD	0.1	S
C219F	ECUV1H104MD	0.1	S
C219G	ECUV1H104MD	0.1	S
C219H	ECUV1H104MD	0.1	S
C220	ECEA1EU101	100	
C220A	ECUV1H393KB	0.039	
C220B	ECUV1H393KB	0.039	
C220C	ECUV1H393KB	0.039	
C220D	ECUV1H393KB	0.039	
C220E	ECUV1H393KB	0.039	
C220E	ECUV1H393KB	0.039	
C220F	ECUV1H393KB	0.039	
C220F	ECUV1H393KB	0.039	
C220G	ECUV1H393KB	0.039	
C220H	ECUV1H393KB	0.039	
C221	ECEA1EU101	100	
C222A	ECEA1HU100	10	
C222B	ECEA1HU100	10	
C222C	ECEA1HU100	10	
C222D	ECEA1HU100	10	
C222E	ECEA1HU100	10	
C222F	ECEA1HU100	10	
C222G	ECEA1HU100	10	
C222H	ECEA1HU100	10	
C251	PQCUV1H223KB	0.022	S
C252	PQCUV1H223KB	0.022	S
C253	PQCUV1H223KB	0.022	S
C254	PQCUV1H223KB	0.022	S
C255	ECEA1HU330	33	
C256	PQCUV1H221JC	220p	
C257	PQCUV1H223KB	0.022	S
C258	PQCUV1H223KB	0.022	S
C260	ECEA1EU471	470	
C262	ECEA1HU330	33	
C263	ECEA1HU330	33	
C264	ECEA1HU330	33	
C265	PQCUV1H223KB	0.022	S
C270	ECEA1AKS101	100	
C280	PQCUV1H223KB	0.022	S
C281	PQCUV1H223KB	0.022	S
C282	PQCUV1H223KB	0.022	S
C283	PQCUV1H223KB	0.022	S
C284	PQCUV1H223KB	0.022	S
C285	PQCUV1H223KB	0.022	S

Ref. No.	Part No.	Part Name & Description	Remarks
C286	PQCUV1H223KB	0.022	S
C287	PQCUV1H223KB	0.022	S
C288	PQCUV1H223KB	0.022	S
C289	PQCUV1H223KB	0.022	S
C290	PQCUV1H223KB	0.022	S
C291	PQCUV1H104ZF	0.1	
C292	ECEA1AU101	100	
C293	ECEA1AU101	100	
C294	PQCUV1H104ZF	0.1	
C299A	PQCUV1H221JC	220p	
C299B	PQCUV1H221JC	220p	
C299C	PQCUV1H221JC	220p	
C299D	PQCUV1H221JC	220p	
C299E	PQCUV1H221JC	220p	
C299F	PQCUV1H221JC	220p	
C299G	PQCUV1H221JC	220p	
C299H	PQCUV1H221JC	220p	
C300	PQCUV1H223KB	0.022	S
C301	PQCUV1H223KB	0.022	S
C900A	PQCUV1H560JC	56p	
C900B	PQCUV1H560JC	56p	
C900C	PQCUV1H560JC	56p	
C900D	PQCUV1H560JC	56p	
C900E	PQCUV1H560JC	56p	
C900F	PQCUV1H560JC	56p	
C900G	PQCUV1H560JC	56p	
C900H	PQCUV1H560JC	56p	
C901A	PQCUV1H560JC	56p	
C901B	PQCUV1H560JC	56p	
C901C	PQCUV1H560JC	56p	
C901D	PQCUV1H560JC	56p	
C901E	PQCUV1H560JC	56p	
C901F	PQCUV1H560JC	56p	
C901G	PQCUV1H560JC	56p	
C901H	PQCUV1H560JC	56p	
		(RESISTORS)	
R200A	PQ4R10XJ390	39	
R200B	PQ4R10XJ390	39	
R200C	PQ4R10XJ390	39	
R200D	PQ4R10XJ390	39	
R200E	PQ4R10XJ390	39	
R200F	PQ4R10XJ390	39	
R200G	PQ4R10XJ390	39	
R200H	PQ4R10XJ390	39	
R201A	PQ4R10XJ222	2.2k	
R201B	PQ4R10XJ222	2.2k	
R201C	PQ4R10XJ222	2.2k	
R201D	PQ4R10XJ222	2.2k	
R201E	PQ4R10XJ222	2.2k	
R201F	PQ4R10XJ222	2.2k	

Ref. No.	Part No.	Part Name & Description	Remarks
R201G	PQ4R10XJ222	2.2k	
R201H	PQ4R10XJ222	2.2k	
R202A	PQ4R10XJ222	2.2k	
R202B	PQ4R10XJ222	2.2k	
R202C	PQ4R10XJ222	2.2k	
R202D	PQ4R10XJ222	2.2k	
R202E	PQ4R10XJ222	2.2k	
R202F	PQ4R10XJ222	2.2k	
R202G	PQ4R10XJ222	2.2k	
R202H	PQ4R10XJ222	2.2k	
R203	PQ4R10XJ101	100	
R204	PQ4R10XJ105	1M	
R205A	ERDS2TJ220	22	
R205B	ERDS2TJ220	22	
R205C	ERDS2TJ220	22	
R205D	ERDS2TJ220	22	
R205E	ERDS2TJ220	22	
R205F	ERDS2TJ220	22	
R205G	ERDS2TJ220	22	
R205H	ERDS2TJ220	22	
R206A	ERDS2TJ680	68	
R206B	ERDS2TJ680	68	
R206C	ERDS2TJ680	68	
R206D	ERDS2TJ680	68	
R206E	ERDS2TJ680	68	
R206F	ERDS2TJ680	68	
R206G	ERDS2TJ680	68	
R206H	ERDS2TJ680	68	
R207A	PQ4R10XJ682	6.8k	
R207B	PQ4R10XJ682	6.8k	
R207C	PQ4R10XJ682	6.8k	
R207D	PQ4R10XJ682	6.8k	
R207E	PQ4R10XJ682	6.8k	
R207F	PQ4R10XJ682	6.8k	
R207G	PQ4R10XJ682	6.8k	
R207H	PQ4R10XJ682	6.8k	
R208A	ERDS2TJ220	22	
R208B	ERDS2TJ220	22	
R208C	ERDS2TJ220	22	
R208D	ERDS2TJ220	22	
R208E	ERDS2TJ220	22	
R208F	ERDS2TJ220	22	
R208G	ERDS2TJ220	22	
R208H	ERDS2TJ220	22	
R209A	ERDS2TJ680	68	
R209B	ERDS2TJ680	68	
R209C	ERDS2TJ680	68	
R209D	ERDS2TJ680	68	
R209E	ERDS2TJ680	68	
R209F	ERDS2TJ680	68	
R209G	ERDS2TJ680	68	
R209H	ERDS2TJ680	68	
R210A	PQ4R10XJ682	6.8k	
R210B	PQ4R10XJ682	6.8k	

Ref. No.	Part No.	Part Name & Description	Remarks
R210C	PQ4R10XJ682	6.8k	
R210D	PQ4R10XJ682	6.8k	
R210E	PQ4R10XJ682	6.8k	
R210F	PQ4R10XJ682	6.8k	
R210G	PQ4R10XJ682	6.8k	
R210H	PQ4R10XJ682	6.8k	
R211A	PQ4R10XF3000	300	
R211B	PQ4R10XF3000	300	
R211C	PQ4R10XF3000	300	
R211D	PQ4R10XF3000	300	
R211E	PQ4R10XF3000	300	
R211F	PQ4R10XF3000	300	
R211G	PQ4R10XF3000	300	
R211H	PQ4R10XF3000	300	
R212A	PQ4R10XF2401	2.4k	
R212B	PQ4R10XF2401	2.4k	
R212C	PQ4R10XF2401	2.4k	
R212D	PQ4R10XF2401	2.4k	
R212E	PQ4R10XF2401	2.4k	
R212F	PQ4R10XF2401	2.4k	
R212G	PQ4R10XF2401	2.4k	
R212H	PQ4R10XF2401	2.4k	
R213A	PQ4R10XF3001	3k	
R213B	PQ4R10XF3001	3k	
R213C	PQ4R10XF3001	3k	
R213D	PQ4R10XF3001	3k	
R213E	PQ4R10XF3001	3k	
R213F	PQ4R10XF3001	3k	
R213G	PQ4R10XF3001	3k	
R213H	PQ4R10XF3001	3k	
R214A	PQ4R10XF8202	82k	
R214B	PQ4R10XF8202	82k	
R214C	PQ4R10XF8202	82k	
R214D	PQ4R10XF8202	82k	
R214E	PQ4R10XF8202	82k	
R214F	PQ4R10XF8202	82k	
R214G	PQ4R10XF8202	82k	
R214H	PQ4R10XF8202	82k	
R215A	PQ4R10XF1103	110k	
R215B	PQ4R10XF1103	110k	
R215C	PQ4R10XF1103	110k	
R215D	PQ4R10XF1103	110k	
R215E	PQ4R10XF1103	110k	
R215F	PQ4R10XF1103	110k	
R215G	PQ4R10XF1103	110k	
R215H	PQ4R10XF1103	110k	
R216A	PQ4R10XF1003	100k	
R216B	PQ4R10XF1003	100k	
R216C	PQ4R10XF1003	100k	
R216D	PQ4R10XF1003	100k	
R216E	PQ4R10XF1003	100k	
R216F	PQ4R10XF1003	100k	
R216G	PQ4R10XF1003	100k	
R216H	PQ4R10XF1003	100k	

Ref. No.	Part No.	Part Name & Description	Remarks
R217A	PQ4R10XF1003	100k	
R217B	PQ4R10XF1003	100k	
R217C	PQ4R10XF1003	100k	
R217D	PQ4R10XF1003	100k	
R217E	PQ4R10XF1003	100k	
R217F	PQ4R10XF1003	100k	
R217G	PQ4R10XF1003	100k	
R217H	PQ4R10XF1003	100k	
R219A	PQ4R10XF1103	110k	
R219B	PQ4R10XF1103	110k	
R219C	PQ4R10XF1103	110k	
R219D	PQ4R10XF1103	110k	
R219E	PQ4R10XF1103	110k	
R219F	PQ4R10XF1103	110k	
R219G	PQ4R10XF1103	110k	
R219H	PQ4R10XF1103	110k	
R220A	PQ4R10XF1103	110k	
R220B	PQ4R10XF1103	110k	
R220C	PQ4R10XF1103	110k	
R220D	PQ4R10XF1103	110k	
R220E	PQ4R10XF1103	110k	
R220F	PQ4R10XF1103	110k	
R220G	PQ4R10XF1103	110k	
R220H	PQ4R10XF1103	110k	
R221A	PQ4R10XF9102	91k	
R221B	PQ4R10XF9102	91k	
R221C	PQ4R10XF9102	91k	
R221D	PQ4R10XF9102	91k	
R221E	PQ4R10XF9102	91k	
R221F	PQ4R10XF9102	91k	
R221G	PQ4R10XF9102	91k	
R221H	PQ4R10XF9102	91k	
R222A	PQ4R10XF3000	300	
R222B	PQ4R10XF3000	300	
R222C	PQ4R10XF3000	300	
R222D	PQ4R10XF3000	300	
R222E	PQ4R10XF3000	300	
R222F	PQ4R10XF3000	300	
R222G	PQ4R10XF3000	300	
R222H	PQ4R10XF3000	300	
R224A	PQ4R10XJ153	15k	
R224B	PQ4R10XJ153	15k	
R224C	PQ4R10XJ153	15k	
R224D	PQ4R10XJ153	15k	
R224E	PQ4R10XJ153	15k	
R224F	PQ4R10XJ153	15k	
R224G	PQ4R10XJ153	15k	
R224H	PQ4R10XJ153	15k	
R225A	PQ4R10XJ333	33k	
R225B	PQ4R10XJ333	33k	
R225C	PQ4R10XJ333	33k	
R225D	PQ4R10XJ333	33k	
R225E	PQ4R10XJ333	33k	

Ref. No.	Part No.	Part Name & Description	Remarks
R225F	PQ4R10XJ333	33k	
R225G	PQ4R10XJ333	33k	
R225H	PQ4R10XJ333	33k	
R226A	PQ4R10XJ103	10k	
R226B	PQ4R10XJ103	10k	
R226C	PQ4R10XJ103	10k	
R226D	PQ4R10XJ103	10k	
R226E	PQ4R10XJ103	10k	
R226F	PQ4R10XJ103	10k	
R226G	PQ4R10XJ103	10k	
R226H	PQ4R10XJ103	10k	
R227A	PQ4R10XJ473	47k	
R227B	PQ4R10XJ473	47k	
R227C	PQ4R10XJ473	47k	
R227D	PQ4R10XJ473	47k	
R227E	PQ4R10XJ473	47k	
R227F	PQ4R10XJ473	47k	
R227G	PQ4R10XJ473	47k	
R227H	PQ4R10XJ473	47k	
R228A	PQ4R10XJ123	12k	
R228B	PQ4R10XJ123	12k	
R228C	PQ4R10XJ123	12k	
R228D	PQ4R10XJ123	12k	
R228E	PQ4R10XJ123	12k	
R228F	PQ4R10XJ123	12k	
R228G	PQ4R10XJ123	12k	
R228H	PQ4R10XJ123	12k	
R229A	PQ4R10XJ333	33k	
R229B	PQ4R10XJ333	33k	
R229C	PQ4R10XJ333	33k	
R229D	PQ4R10XJ333	33k	
R229E	PQ4R10XJ333	33k	
R229F	PQ4R10XJ333	33k	
R229G	PQ4R10XJ333	33k	
R229H	PQ4R10XJ333	33k	
R230A	PQ4R10XJ103	10k	
R230B	PQ4R10XJ103	10k	
R230C	PQ4R10XJ103	10k	
R230D	PQ4R10XJ103	10k	
R230E	PQ4R10XJ103	10k	
R230F	PQ4R10XJ103	10k	
R230G	PQ4R10XJ103	10k	
R230H	PQ4R10XJ103	10k	
R231A	PQ4R10XJ102	1k	
R231B	PQ4R10XJ102	1k	
R231C	PQ4R10XJ102	1k	
R231D	PQ4R10XJ102	1k	
R231E	PQ4R10XJ102	1k	
R231F	PQ4R10XJ102	1k	
R231G	PQ4R10XJ102	1k	
R231H	PQ4R10XJ102	1k	
R232A	PQRD2TJ102	1k	
R232B	PQRD2TJ102	1k	

Ref. No.	Part No.	Part Name & Description	Remarks
R232C	PQRD2TJ102	1k	
R232D	PQRD2TJ102	1k	
R232E	PQRD2TJ102	1k	
R232F	PQRD2TJ102	1k	
R232G	PQRD2TJ102	1k	
R232H	PQRD2TJ102	1k	
R234A	PQ4R10XJ222	2.2k	
R234B	PQ4R10XJ222	2.2k	
R234C	PQ4R10XJ222	2.2k	
R234D	PQ4R10XJ222	2.2k	
R234E	PQ4R10XJ222	2.2k	
R234F	PQ4R10XJ222	2.2k	
R234G	PQ4R10XJ222	2.2k	
R234H	PQ4R10XJ222	2.2k	
R235A	PQ4R10XJ561	560	
R235B	PQ4R10XJ561	560	
R235C	PQ4R10XJ561	560	
R235D	PQ4R10XJ561	560	
R235E	PQ4R10XJ561	560	
R235F	PQ4R10XJ561	560	
R235G	PQ4R10XJ561	560	
R235H	PQ4R10XJ561	560	
R236A	PQ4R10XJ222	2.2k	
R236B	PQ4R10XJ222	2.2k	
R236C	PQ4R10XJ222	2.2k	
R236D	PQ4R10XJ222	2.2k	
R236E	PQ4R10XJ222	2.2k	
R236F	PQ4R10XJ222	2.2k	
R236G	PQ4R10XJ222	2.2k	
R236H	PQ4R10XJ222	2.2k	
R237A	PQ4R10XJ561	560	
R237B	PQ4R10XJ561	560	
R237C	PQ4R10XJ561	560	
R237D	PQ4R10XJ561	560	
R237E	PQ4R10XJ561	560	
R237F	PQ4R10XJ561	560	
R237G	PQ4R10XJ561	560	
R237H	PQ4R10XJ561	560	
R238A	PQ4R10XJ390	39	
R238B	PQ4R10XJ390	39	
R238C	PQ4R10XJ390	39	
R238D	PQ4R10XJ390	39	
R238E	PQ4R10XJ390	39	
R238F	PQ4R10XJ390	39	
R238G	PQ4R10XJ390	39	
R238H	PQ4R10XJ390	39	
R239A	PQ4R10XJ222	2.2k	
R239B	PQ4R10XJ222	2.2k	
R239C	PQ4R10XJ222	2.2k	
R239D	PQ4R10XJ222	2.2k	
R239E	PQ4R10XJ222	2.2k	
R239F	PQ4R10XJ222	2.2k	
R239G	PQ4R10XJ222	2.2k	
R239H	PQ4R10XJ222	2.2k	

Ref. No.	Part No.	Part Name & Description	Remarks
R240A	PQ4R10XJ222	2.2k	
R240B	PQ4R10XJ222	2.2k	
R240C	PQ4R10XJ222	2.2k	
R240D	PQ4R10XJ222	2.2k	
R240E	PQ4R10XJ222	2.2k	
R240F	PQ4R10XJ222	2.2k	
R240G	PQ4R10XJ222	2.2k	
R240H	PQ4R10XJ222	2.2k	
R241	ERDS2TJ473	47k	
R242	PQ4R10XJ682	6.8k	
R243	PQ4R10XJ223	22k	
R244	PQ4R10XJ472	4.7k	
R245	PQ4R10XJ153	15k	
R246	ERDS2TJ152	1.5k	
R247	PQ4R10XJ223	22k	
R248A	PQ4R10XJ561	560	
R248B	PQ4R10XJ561	560	
R248C	PQ4R10XJ561	560	
R248D	PQ4R10XJ561	560	
R248E	PQ4R10XJ561	560	
R248F	PQ4R10XJ561	560	
R248G	PQ4R10XJ561	560	
R248H	PQ4R10XJ561	560	
R251	PQ4R10XJ103	10k	
R252	PQ4R10XJ103	10k	
R253	PQ4R10XJ103	10k	
R254	PQ4R10XJ103	10k	
R255	PQ4R10XJ393	39k	
R256	PQ4R10XJ104	100k	
R257	PQ4R10XJ334	330k	
R258	PQ4R10XJ393	39k	
R259	PQ4R10XJ104	100k	
R260	PQ4R10XJ334	330k	
R261	PQRD1TJ820	82	
R262	ERDS2TJ152	1.5k	
R263	PQ4R10XJ152	1.5k	
R264	PQ4R10XJ152	1.5k	
R265	PQ4R10XJ103	10k	
R266	PQ4R10XJ103	10k	
R270	ERDS2TJ220	22	
R271	PQ4R10XJ682	6.8k	
R272	PQ4R10XJ101	100	
R275A	PQ4R10XJ563	56k	
R275B	PQ4R10XJ563	56k	
R275C	PQ4R10XJ563	56k	
R275D	PQ4R10XJ563	56k	
R275E	PQ4R10XJ563	56k	
R275F	PQ4R10XJ563	56k	
R275G	PQ4R10XJ563	56k	
R275H	PQ4R10XJ563	56k	

Ref. No.	Part No.	Part Name & Description	Remarks
R276A	PQ4R10XJ470	47	
R276B	PQ4R10XJ470	47	
R276C	PQ4R10XJ470	47	
R276D	PQ4R10XJ470	47	
R276E	PQ4R10XJ470	47	
R276F	PQ4R10XJ470	47	
R276G	PQ4R10XJ470	47	
R276H	PQ4R10XJ470	47	
R277A	PQ4R10XJ470	47	
R277B	PQ4R10XJ470	47	
R277C	PQ4R10XJ470	47	
R277D	PQ4R10XJ470	47	
R277E	PQ4R10XJ470	47	
R277F	PQ4R10XJ470	47	
R277G	PQ4R10XJ470	47	
R277H	PQ4R10XJ470	47	
R278A	PQ4R10XJ560	56	
R278B	PQ4R10XJ560	56	
R278C	PQ4R10XJ560	56	
R278D	PQ4R10XJ560	56	
R278E	PQ4R10XJ560	56	
R278F	PQ4R10XJ560	56	
R278G	PQ4R10XJ560	56	
R278H	PQ4R10XJ560	56	
R279A	PQ4R10XJ560	56	
R279B	PQ4R10XJ560	56	
R279C	PQ4R10XJ560	56	
R279D	PQ4R10XJ560	56	
R279E	PQ4R10XJ560	56	
R279F	PQ4R10XJ560	56	
R279G	PQ4R10XJ560	56	
R279H	PQ4R10XJ560	56	
R280	PQ4R10XJ223	22k	
R281	PQ4R10XJ223	22k	
R285	PQ4R10XJ122	1.2k	
R286	PQ4R10XJ152	1.5k	
R293	PQ4R10XF6801	6.8k	
R294	PQ4R10XF1201	1.2k	
R299A	PQ4R10XJ101	100	
R299B	PQ4R10XJ101	100	
R299C	PQ4R10XJ101	100	
R299D	PQ4R10XJ101	100	
R299E	PQ4R10XJ101	100	
R299F	PQ4R10XJ101	100	
R299G	PQ4R10XJ101	100	
R299H	PQ4R10XJ101	100	
R400	PQ4R10XJ152	1.5k	
R801	PQ4R10XJ330	33	
R802	PQ4R10XJ330	33	
R803	PQ4R10XJ330	33	

Ref. No.	Part No.	Part Name & Description	Remarks
R804	PQ4R10XJ330	33	
R805	PQ4R10XJ330	33	
R900A	PQ4R10XF9102	91k	
R900B	PQ4R10XF9102	91k	
R900C	PQ4R10XF9102	91k	
R900D	PQ4R10XF9102	91k	
R900E	PQ4R10XF9102	91k	
R900F	PQ4R10XF9102	91k	
R900G	PQ4R10XF9102	91k	
R900H	PQ4R10XF9102	91k	
J201	PQ4R10XJ000	0	
J202	PQ4R10XJ000	0	
J203	PQ4R10XJ000	0	
J204	PQ4R10XJ000	0	
J250A	PQ4R10XJ000	0	
J250B	PQ4R10XJ000	0	
J250C	PQ4R10XJ000	0	
J250D	PQ4R10XJ000	0	
J250E	PQ4R10XJ000	0	
J250F	PQ4R10XJ000	0	
J250G	PQ4R10XJ000	0	
J250H	PQ4R10XJ000	0	
J252A	PQ4R10XJ000	0	
J252B	PQ4R10XJ000	0	
J252C	PQ4R10XJ000	0	
J252D	PQ4R10XJ000	0	
J252E	PQ4R10XJ000	0	
J252F	PQ4R10XJ000	0	
J252G	PQ4R10XJ000	0	
J252H	PQ4R10XJ000	0	
J254A	PQ4R10XJ000	0	
J254B	PQ4R10XJ000	0	
J254C	PQ4R10XJ000	0	
J254D	PQ4R10XJ000	0	
J254E	PQ4R10XJ000	0	
J254F	PQ4R10XJ000	0	
J254G	PQ4R10XJ000	0	
J254H	PQ4R10XJ000	0	
J256A	PQ4R10XJ000	0	
J256B	PQ4R10XJ000	0	
J256C	PQ4R10XJ000	0	
J256D	PQ4R10XJ000	0	
J256E	PQ4R10XJ000	0	
J256F	PQ4R10XJ000	0	
J256G	PQ4R10XJ000	0	
J256H	PQ4R10XJ000	0	
		(CERAMIC FILTERS)	
L210	PQVFTU50MT	CERAMIC FILTER	
L211	PQVFTU50MT	CERAMIC FILTER	
L212	PQVFTU50MT	CERAMIC FILTER	

Ref. No.	Part No.	Part Name & Description	Remarks
X201	PQVBFC3584A1	CERAMIC FILTER	S
		(COMPONENTS COMBINATIONS)	
Z200	PQRSLD8X472J	RESISTOR ARRAY	S
Z201	PQRSLD8X472J	RESISTOR ARRAY	S
Z202	PQRSLD8X472J	RESISTOR ARRAY	S
Z203	PQRSLD8X472J	RESISTOR ARRAY	S
		(FUSES)	
F200	PQBA1N20NMAL	FUSE	⚠S
F201	PQBA1N20NMAL	FUSE	⚠S
		(OTHER)	
E1	PQMC10038Z	MAGNETIC SHIELD	

24.4. SUB BOARD PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
PCB2	PSWP2123270M	SUB BOARD ASS'Y (RTL)	
		(TRANSISTORS)	
Q200A	2SA1576R	TRANSISTOR(SI)	
Q200B	2SA1576R	TRANSISTOR(SI)	
Q200C	2SA1576R	TRANSISTOR(SI)	
Q200D	2SA1576R	TRANSISTOR(SI)	
Q200E	2SC4081R	TRANSISTOR(SI)	
Q200F	2SC4081R	TRANSISTOR(SI)	
Q200G	2SC4081R	TRANSISTOR(SI)	
Q200H	2SC4081R	TRANSISTOR(SI)	
Q207A	PQVTDTC143E	TRANSISTOR(SI)	
Q207B	PQVTDTC143E	TRANSISTOR(SI)	
Q207C	PQVTDTC143E	TRANSISTOR(SI)	
Q207D	PQVTDTC143E	TRANSISTOR(SI)	
Q207E	PQVTDTC143E	TRANSISTOR(SI)	
Q207F	PQVTDTC143E	TRANSISTOR(SI)	
Q207G	PQVTDTC143E	TRANSISTOR(SI)	
Q207H	PQVTDTC143E	TRANSISTOR(SI)	
Q221	PQVTDTC143E	TRANSISTOR(SI)	
		(DIODES)	
D214A	1SS131	DIODE(SI)	
D214B	1SS131	DIODE(SI)	
D214C	1SS131	DIODE(SI)	
D214D	1SS131	DIODE(SI)	
D214E	1SS131	DIODE(SI)	
D214F	1SS131	DIODE(SI)	
D214G	1SS131	DIODE(SI)	
D214H	1SS131	DIODE(SI)	
D225	1SS131	DIODE(SI)	

Ref. No.	Part No.	Part Name & Description	Remarks
		(JACKS AND CONNECTORS)	
CN200	PQJS50Q30Y	JACK	
CN202	PQJJ1TB26Z	JACK	
CN203	PQJP34D30Y	ONNECTOR,34P	
CN204	PQJP34D30Y	ONNECTOR,34P	
		(CAPACITORS)	
C200A	ECEA1HKS2R2	2.2	
C200B	ECEA1HKS2R2	2.2	
C200C	ECEA1HKS2R2	2.2	
C200D	ECEA1HKS2R2	2.2	
C200E	ECEA1HKS2R2	2.2	
C200F	ECEA1HKS2R2	2.2	
C200G	ECEA1HKS2R2	2.2	
C200H	ECEA1HKS2R2	2.2	
		(RESISTORS)	
R233A	ERDS2TJ1R8	1.8	
R233B	ERDS2TJ1R8	1.8	
R233C	ERDS2TJ1R8	1.8	
R233D	ERDS2TJ1R8	1.8	
R233E	ERDS2TJ1R8	1.8	
R233F	ERDS2TJ1R8	1.8	
R233G	ERDS2TJ1R8	1.8	
R233H	ERDS2TJ1R8	1.8	
R295A	PQ4R10XJ101	100	
R295B	PQ4R10XJ101	100	
R295C	PQ4R10XJ101	100	
R295D	PQ4R10XJ101	100	
R295E	PQ4R10XJ101	100	
R295F	PQ4R10XJ101	100	
R295G	PQ4R10XJ101	100	
R295H	PQ4R10XJ101	100	
		(COILS)	
L202A	PQLE106	COIL	S
L202B	PQLE106	COIL	S
L202C	PQLE106	COIL	S
L202E	PQLE106	COIL	S
L202F	PQLE106	COIL	S
L202G	PQLE106	COIL	S
L202H	PQLE106	COIL	S
L203A	PQLE106	COIL	S
L203B	PQLE106	COIL	S
L203C	PQLE106	COIL	S
L203D	PQLE106	COIL	S
L203E	PQLE106	COIL	S
L203F	PQLE106	COIL	S
L203G	PQLE106	COIL	S
L203H	PQLE106	COIL	S
		(RELAYS)	

Ref. No.	Part No.	Part Name & Description	Remarks
RY200A	PQSL44Z	RELAY	
RY202A	PQSL119Z	RELAY	
RY202B	PQSL119Z	RELAY	
RY202C	PQSL119Z	RELAY	
RY202D	PQSL119Z	RELAY	
RY202E	PQSL119Z	RELAY	
RY202F	PQSL119Z	RELAY	
RY202G	PQSL119Z	RELAY	
RY202H	PQSL119Z	RELAY	
		(TRANSFORMERS)	
T201A	ETE13K38AY	TRANSFORMER	S
T201B	ETE13K38AY	TRANSFORMER	S
T201C	ETE13K38AY	TRANSFORMER	S
T201D	ETE13K38AY	TRANSFORMER	S
T201E	ETE13K38AY	TRANSFORMER	S
T201F	ETE13K38AY	TRANSFORMER	S
T201G	ETE13K38AY	TRANSFORMER	S
T201H	ETE13K38AY	TRANSFORMER	S
		(VARISTORS)	
ZNR202A	PQVDNV039D03	VARISTOR	S
ZNR202B	PQVDNV039D03	VARISTOR	S
ZNR202C	PQVDNV039D03	VARISTOR	S
ZNR202D	PQVDNV039D03	VARISTOR	S
ZNR202E	PQVDNV039D03	VARISTOR	S
ZNR202F	PQVDNV039D03	VARISTOR	S
ZNR202G	PQVDNV039D03	VARISTOR	S
ZNR202H	PQVDNV039D03	VARISTOR	S
ZNR203A	PQVDNV039D03	VARISTOR	S
ZNR203B	PQVDNV039D03	VARISTOR	S
ZNR203C	PQVDNV039D03	VARISTOR	S
ZNR203D	PQVDNV039D03	VARISTOR	S
ZNR203E	PQVDNV039D03	VARISTOR	S
ZNR203F	PQVDNV039D03	VARISTOR	S
ZNR203G	PQVDNV039D03	VARISTOR	S
ZNR203H	PQVDNV039D03	VARISTOR	S
ZNR204A	PQVDNV039D03	VARISTOR	S
ZNR204B	PQVDNV039D03	VARISTOR	S
ZNR204C	PQVDNV039D03	VARISTOR	S
ZNR204D	PQVDNV039D03	VARISTOR	S
ZNR204E	PQVDNV039D03	VARISTOR	S
ZNR204F	PQVDNV039D03	VARISTOR	S
ZNR204G	PQVDNV039D03	VARISTOR	S
ZNR204H	PQVDNV039D03	VARISTOR	S
ZNR205A	PQVDNV039D03	VARISTOR	S
ZNR205B	PQVDNV039D03	VARISTOR	S
ZNR205C	PQVDNV039D03	VARISTOR	S
ZNR205D	PQVDNV039D03	VARISTOR	S
ZNR205E	PQVDNV039D03	VARISTOR	S
ZNR205F	PQVDNV039D03	VARISTOR	S
ZNR205G	PQVDNV039D03	VARISTOR	S
ZNR205H	PQVDNV039D03	VARISTOR	S

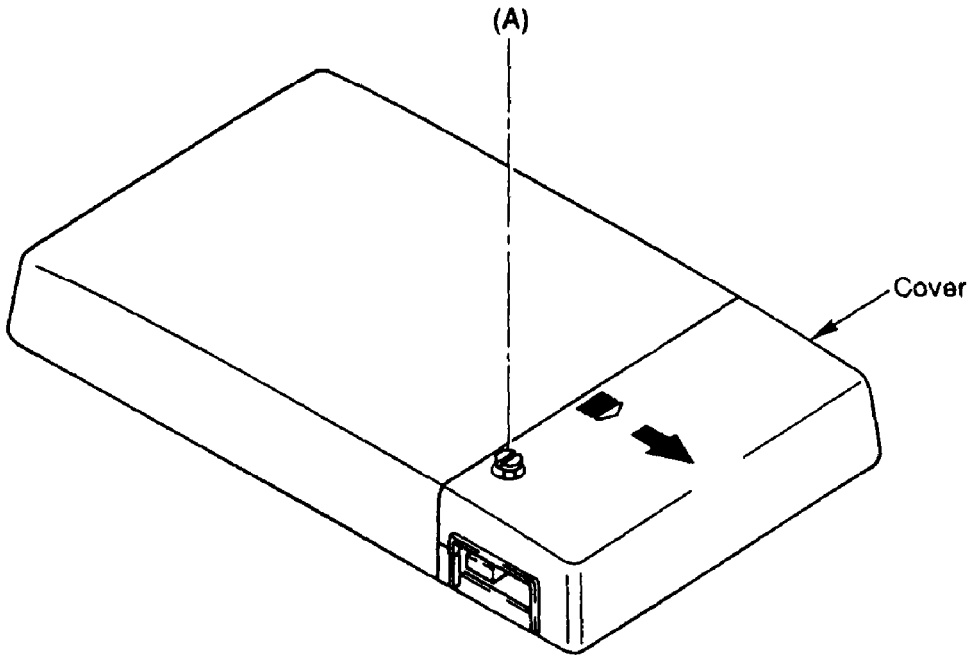
25. DISASSEMBLY INSTRUCTION (KX-TA123280)

25.1. HOW TO REMOVE THE COVER

Procedure 25.1.

1. Remove the Screws (A).

2. Slide the Cover in the direction of the arrow when removing it.

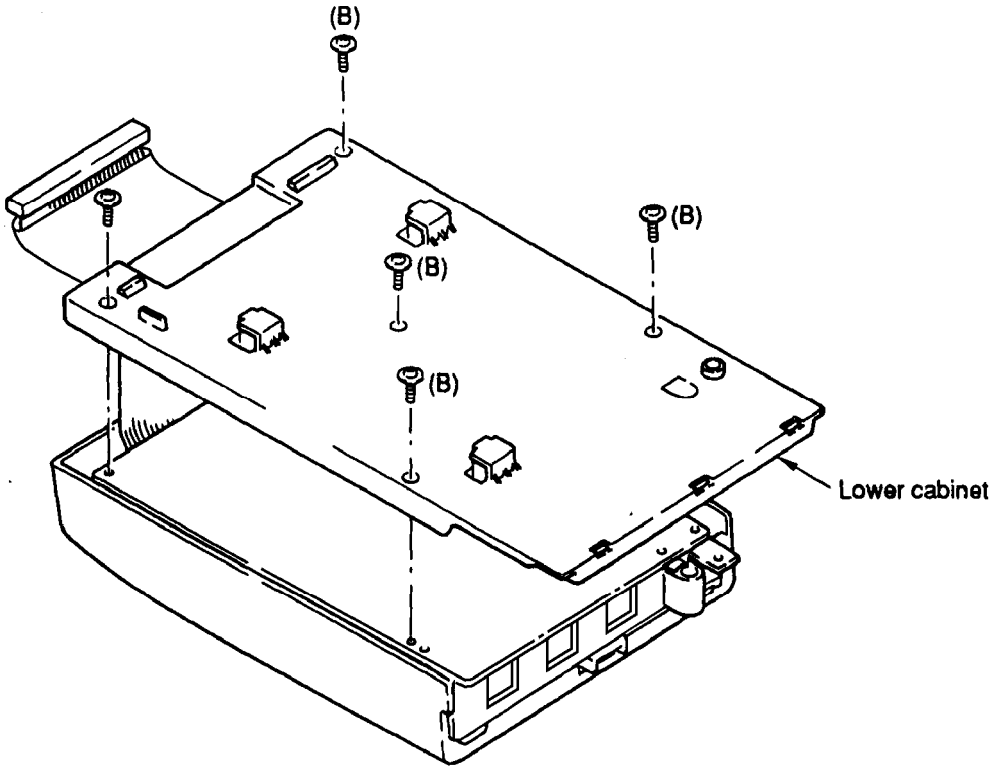


25.2. HOW TO REMOVE THE LOWER CABINET

Procedure 25.1. → 25.2.

1. Remove the five Screws (B).

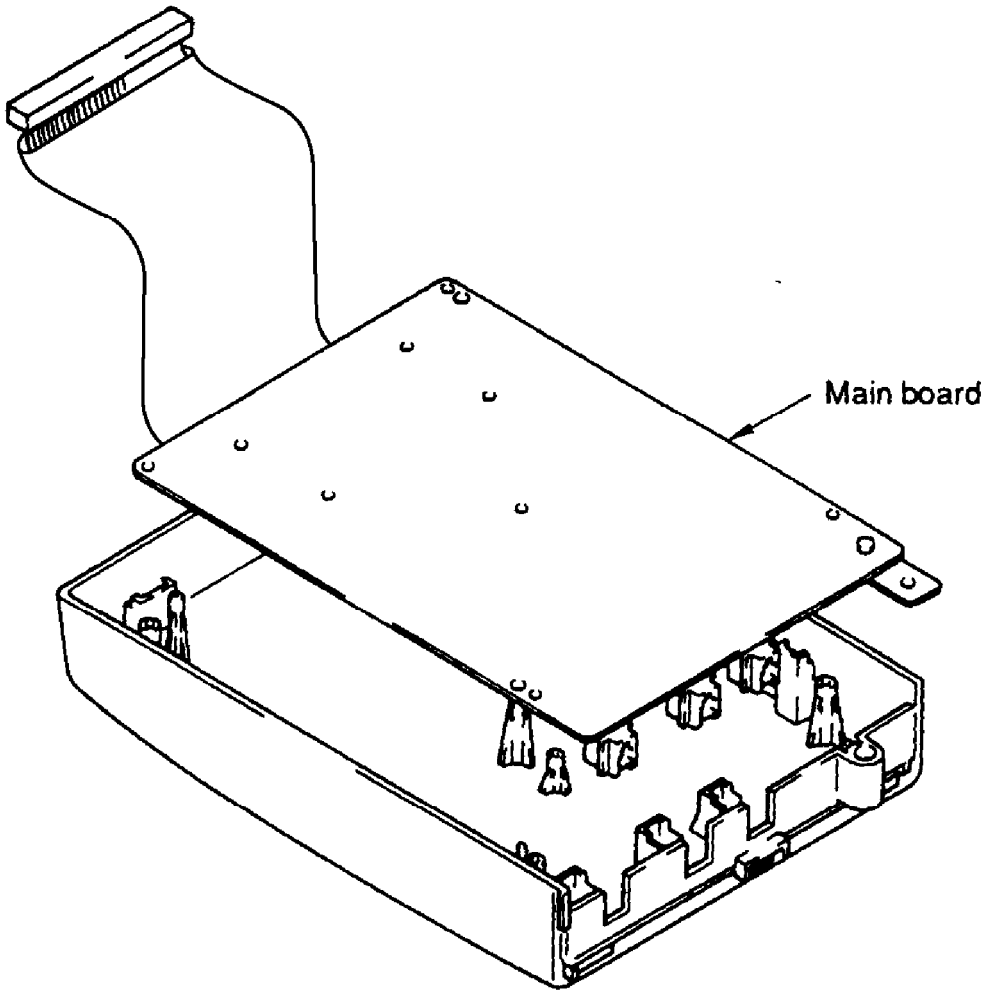
2. Remove the Lower Cabinet.



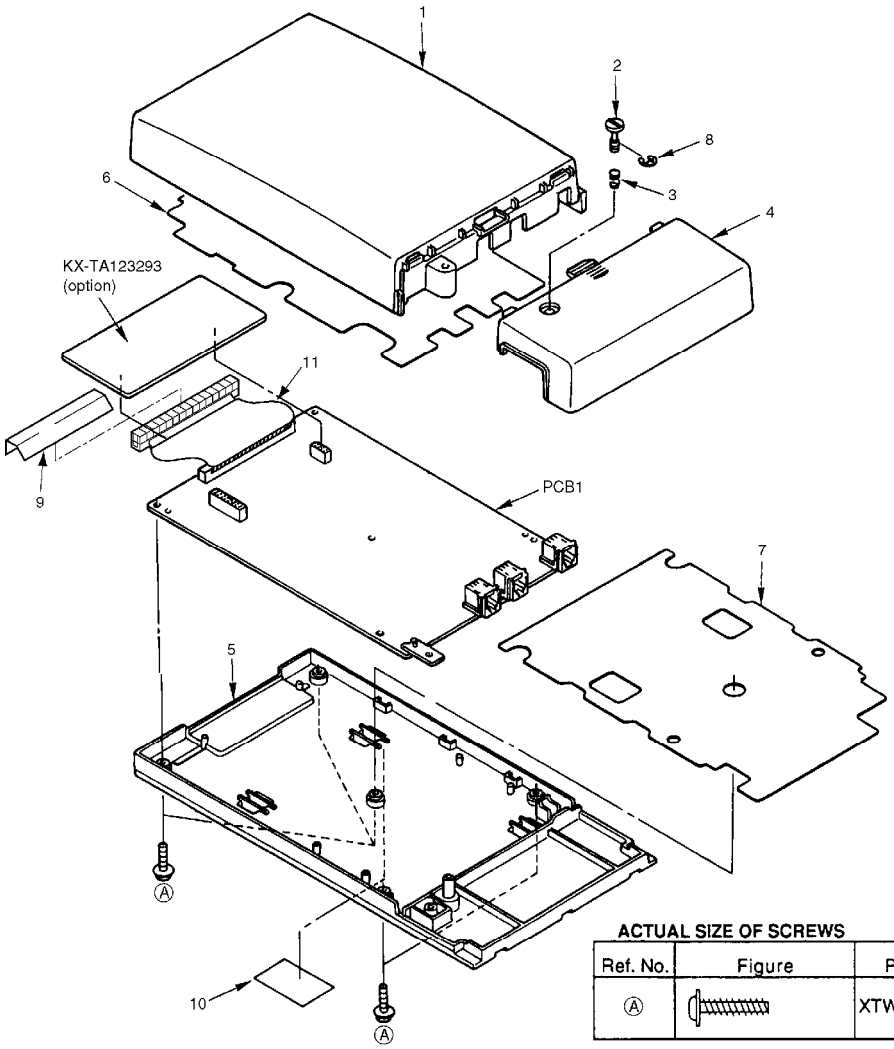
25.3. HOW TO REMOVE THE MAIN BOARD

Procedure 25.1. → 25.2. → 25.3.

1. Remove the Main Board.



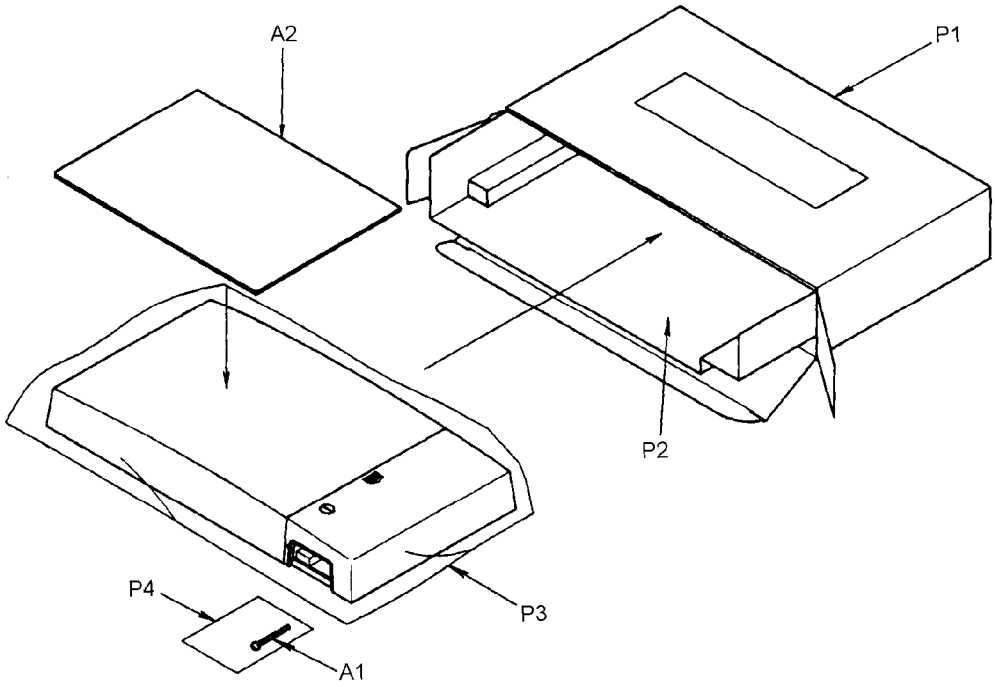
26. CABINET AND ELECTRICAL PARTS LOCATION (KX-TA123280)



ACTUAL SIZE OF SCREWS

Ref. No.	Figure	Part No.
Ⓐ		XTW3+S14P

27. ACCESSORIES AND PACKING MATERIALS (KX-TA123280)



28. REPLACEMENT PARTS LIST (KX-TA123280)

Notes:

1. **The marking (RTL) indicates that the Retention Time is limited for this item.**
   After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing parts and product retention.
   After the end of this period, the assembly will no longer be available.
2. **Important safety notice**
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.
3. **The S mark indicates service standard parts and may differ from production parts.**
4. **RESISTORS & CAPACITORS**
   Unless otherwise specified;

All resistors are in ohms (Ω). k=1000 Ω , M=1000k Ω
All capacitors are in MICRO FARADS (μ F). p= μ (μ F)
***Type & Wattage of Resistor**

Type

ERC:Solid ERD:Carbon PQ4R:Chip	ERX:Metal Film ERG:Metal Oxide ERO:Metal Film	PQRD:Carbon PQRQ:Fuse ERF:Wire Wound

Wattage

10,16,18:1/8W	14,25,S2:1/4W	12,50,S1:1/2W	1:1W	2:2W	5:5W

ECFD:Semi-Conductor ECQS:Styrol PQCBX,ECUV:Chip ECMS:Mica	ECCD,ECKD,PQCBC,PQVP : Ceramic ECQM,ECQV,ECQE,ECQU,ECQB : Polyester ECEA,ECSZ,ECOS : Electrolytic ECQP : Polypropylene

Voltage

ECQ Type	ECQG ECQV Type	ECSZ Type	Others	
1H : 50V 2A : 100V 2E : 250V 2H : 500V	05 : 50V 1 : 100V 2 : 200V	OF : 3.15V 1A : 10V 1V : 35V OJ : 6.3V	OJ : 6.3V 1A : 10V 1C : 16V 1E,25 : 25V	1V : 35V 50,1H : 50V 1J : 63V 2A : 100V

28.1. CABINET AND ELECTRICAL PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
1	PQKM10029U1	CABINET BODY	
2	PQHD10011Z	SCREW	
3	PQUS141Z	COIL SPRING	
4	PQKV10007Z1	COVER	
5	PQKF10026Y1	LOWER CABINET	
6	PQMC10065Z	MAGNETIC SHIELD	
7	PQMC10066W	MAGNETIC SHIELD	
8	XUC3VW	RETAINING RING	
9	PQHX10426Z	PVC SHEET	
10	PSGT2164Z	NAME PLATE	
11	PQMC10076Z	SHIELD COVER	

28.2. ACCESSORIES AND PACKING MATERIALS

Ref. No.	Part No.	Part Name & Description	Remarks
A1	XYN4+C35FN	SCREW WITH WASHER	
A2	PSQX2485Z	INSTRUCTION BOOK	
P1	PQPK10118Z	GIFT BOX	
P2	PQPD10027Z	CUSHION	
P3	PQPP10047Z	PROTECTION COVER(FOR SET)	
P4	XZB05X08A03Z	PROTECTION COVER (FOR ACCESSORIES)	

28.3. MAIN BOARD PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
PCB1	PSWPA123280M	MAIN BOARD ASS'Y (RTL)	
		(ICS)	
IC101A	PQVINJM4558D	IC	S
IC101B	PQVINJM4558D	IC	S
IC101C	PQVINJM4558D	IC	S
IC101D	PQVINJM4558D	IC	S
IC102A	PQVIMC45503P	IC	
IC102B	PQVIMC45503P	IC	
IC102C	PQVIMC45503P	IC	
IC102D	PQVIMC45503P	IC	
IC111	PQVI92018554	IC	S
IC112	PQVISN7L138M	IC	
IC113	PQVISN7L175M	IC	
IC114	PQVISN7L138M	IC	S
IC116	PQVISN7L640M	IC	
IC117	PQVISN7L08S	IC	S
IC118	PQVISN7L86S	IC	S
IC123	PQVISN7L14S	IC	S
		(TRANSISTORS)	
Q101A	2SD1897	TRANSISTOR(SI)	
Q101B	2SD1897	TRANSISTOR(SI)	
Q101C	2SD1897	TRANSISTOR(SI)	
Q101D	2SD1897	TRANSISTOR(SI)	
Q111	2SB1237R	TRANSISTOR(SI)	
Q112	DTA144A	TRANSISTOR(SI)	S
Q120A	2SA1627	TRANSISTOR(SI)	
Q120B	2SA1627	TRANSISTOR(SI)	
Q120C	2SA1627	TRANSISTOR(SI)	
Q120D	2SA1627	TRANSISTOR(SI)	
		(DIODES)	
D101A	PQVDS1YB60F1	DIODE(SI)	S
D101B	PQVDS1YB60F1	DIODE(SI)	S
D101C	PQVDS1YB60F1	DIODE(SI)	S
D101D	PQVDS1YB60F1	DIODE(SI)	S
D102A	MA4020	DIODE(SI)	S
D102B	MA4020	DIODE(SI)	S
D102C	MA4020	DIODE(SI)	S
D102D	MA4020	DIODE(SI)	S
D103A	MA4020	DIODE(SI)	S
D103B	MA4020	DIODE(SI)	S
D103C	MA4020	DIODE(SI)	S
D103D	MA4020	DIODE(SI)	S
D104A	MA3047	DIODE(SI)	
D104B	MA3047	DIODE(SI)	
D104C	MA3047	DIODE(SI)	
D104D	MA3047	DIODE(SI)	
D105A	MA3047	DIODE(SI)	
D105B	MA3047	DIODE(SI)	

Ref. No.	Part No.	Part Name & Description	Remarks
D105C	MA3047	DIODE(SI)	
D105D	MA3047	DIODE(SI)	
D154	MA4056	DIODE(SI)	
D155	MA723	DIODE(SI)	
		(CONNECTORS, JACKS AND CORD)	
CN104	PQJS22A15Z	CONNECTOR,22P	
CN105	PQJS08A15Z	CONNECTOR,8P	
CN108	PQJJ1TB26Z	JACK	
CN109	PQJJ1TB26Z	JACK	
CN110	PQJJ1TB26Z	JACK	
CN112	PQJS04A15Z	CONNECTOR CORD	
		(CAPACITORS)	
C101A	ECKDKC222KB	0.0022	S
C101B	ECKDKC222KB	0.0022	S
C101C	ECKDKC222KB	0.0022	S
C101D	ECKDKC222KB	0.0022	S
C102A	ECQE2E474KZ	0.47	S
C102B	ECQE2E474KZ	0.47	S
C102C	ECQE2E474KZ	0.47	S
C102D	ECQE2E474KZ	0.47	S
C103A	ECEA1HU100	10	
C103B	ECEA1HU100	10	
C103C	ECEA1HU100	10	
C103D	ECEA1HU100	10	
C104A	ECEA1HU220	22	
C104B	ECEA1HU220	22	
C104C	ECEA1HU220	22	
C104D	ECEA1HU220	22	
C105A	PQCUV1H102J	0.001	S
C105B	PQCUV1H102J	0.001	S
C105C	PQCUV1H102J	0.001	S
C105D	PQCUV1H102J	0.001	S
C106A	PQCUV1H563KB	0.056	
C106B	PQCUV1H563KB	0.056	
C106C	PQCUV1H563KB	0.056	
C106D	PQCUV1H563KB	0.056	
C107A	PQCUV1H820JC	82p	
C107B	PQCUV1H820JC	82p	
C107C	PQCUV1H820JC	82p	
C107D	PQCUV1H820JC	82p	
C108A	ECUV1H183KB	0.018	
C108B	ECUV1H183KB	0.018	
C108C	ECUV1H183KB	0.018	
C108D	ECUV1H183KB	0.018	
C109A	PQCUV1H223KB	0.022	S
C109B	PQCUV1H223KB	0.022	S
C109C	PQCUV1H223KB	0.022	S
C109D	PQCUV1H223KB	0.022	S
C110A	PQCUV1H223KB	0.022	S
C110B	PQCUV1H223KB	0.022	S

Ref. No.	Part No.	Part Name & Description	Remarks
C110C	PQCUV1H223KB	0.022	S
C110D	PQCUV1H223KB	0.022	S
C111A	ECEA1HUR47	0.47	
C111B	ECEA1HUR47	0.47	
C111C	ECEA1HUR47	0.47	
C111D	ECEA1HUR47	0.47	
C151	ECEA1HU330	33	
C152	ECEA1HU330	33	
C153	ECEA1HU330	33	
C154	ECEA1HKS010	1	S
C155	PQCUV1H223KB	0.022	S
C156	PQCUV1H223KB	0.022	S
C157	PQCUV1H223KB	0.022	S
C158	PQCUV1H223KB	0.022	S
C159	PQCUV1H223KB	0.022	S
C160	PQCUV1H223KB	0.022	S
C161	PQCUV1H223KB	0.022	S
C162	PQCUV1H223KB	0.022	S
C163	PQCUV1H223KB	0.022	S
C164	PQCUV1H103ZF	0.01	
C170	ECEA1EU331	330	
C171	ECEA0JU102	1000	
		(RESISTORS)	
R101A	ERQN1VJ273	27k	
R101B	ERQN1VJ273	27k	
R101C	ERQN1VJ273	27k	
R101D	ERQN1VJ273	27k	
R102A	ERDS2TJ822	8.2k	
R102B	ERDS2TJ822	8.2k	
R102C	ERDS2TJ822	8.2k	
R102D	ERDS2TJ822	8.2k	
R103A	ERDS2TJ390	39	
R103B	ERDS2TJ390	39	
R103C	ERDS2TJ390	39	
R103D	ERDS2TJ390	39	
R104A	PQ4R10XJ103	10k	
R104B	PQ4R10XJ103	10k	
R104C	PQ4R10XJ103	10k	
R104D	PQ4R10XJ103	10k	
R105A	PQ4R10XJ471	470	
R105B	PQ4R10XJ471	470	
R105C	PQ4R10XJ471	470	
R105D	PQ4R10XJ471	470	
R107A	PQ4R10XF1211	1.21k	
R107A	PQ4R10XF1211	1.21k	
R107B	PQ4R10XF1211	1.21k	
R107B	PQ4R10XF1211	1.21k	
R107C	PQ4R10XF1211	1.21k	
R107C	PQ4R10XF1211	1.21k	
R107D	PQ4R10XF1211	1.21k	

Ref. No.	Part No.	Part Name & Description	Remarks
R107D	PQ4R10XF1211	1.21k	
R108A	PQ4R10XJ821	820	
R108B	PQ4R10XJ821	820	
R108C	PQ4R10XJ821	820	
R108D	PQ4R10XJ821	820	
R110A	PQ4R10XF2323	232k	
R110B	PQ4R10XF2323	232k	
R110C	PQ4R10XF2323	232k	
R110D	PQ4R10XF2323	232k	
R111A	PQ4R10XF1003	100k	
R111B	PQ4R10XF1003	100k	
R111C	PQ4R10XF1003	100k	
R111D	PQ4R10XF1003	100k	
R112A	PQ4R10XF1003	100k	
R112B	PQ4R10XF1003	100k	
R112C	PQ4R10XF1003	100k	
R112D	PQ4R10XF1003	100k	
R113A	PQ4R10XF1003	100k	
R113B	PQ4R10XF1003	100k	
R113C	PQ4R10XF1003	100k	
R114A	PQ4R10XF4702	47k	
R114B	PQ4R10XF4702	47k	
R114C	PQ4R10XF4702	47k	
R114D	PQ4R10XF1003	100k	
R114D	PQ4R10XF4702	47k	
R115A	PQ4R10XF1203	120k	
R115B	PQ4R10XF1203	120k	
R115C	PQ4R10XF1203	120k	
R115D	PQ4R10XF1203	120k	
R116A	PQ4R10XF4702	47k	
R116B	PQ4R10XF4702	47k	
R116C	PQ4R10XF4702	47k	
R116D	PQ4R10XF4702	47k	
R118A	ERDS2TJ122	1.2k	
R118B	ERDS2TJ122	1.2k	
R118C	ERDS2TJ122	1.2k	
R118D	ERDS2TJ122	1.2k	
R119A	PQ4R10XF1211	1.21k	
R119A	PQ4R10XF1211	1.21k	
R119B	PQ4R10XF1211	1.21k	
R119B	PQ4R10XF1211	1.21k	
R119C	PQ4R10XF1211	1.21k	
R119C	PQ4R10XF1211	1.21k	
R119D	PQ4R10XF1211	1.21k	
R119D	PQ4R10XF1211	1.21k	
R122A	ERDS2TJ222	2.2k	
R122B	ERDS2TJ222	2.2k	
R122C	ERDS2TJ222	2.2k	
R122D	ERDS2TJ222	2.2k	
R153	PQ4R10XJ152	1.5k	
R154	PQRD1VJ221	220	

Ref. No.	Part No.	Part Name & Description	Remarks
R155	PQ4R10XJ103	10k	
R156	PQ4R10XJ103	10k	
R157	PQ4R10XJ103	10k	
R158	PQ4R10XJ103	10k	
R159	PQ4R10XJ103	10k	
R160	PQ4R10XJ103	10k	
R161A	ERDS2TJ560	56	
R161B	ERDS2TJ560	56	
R161C	ERDS2TJ560	56	
R161D	ERDS2TJ560	56	
R162A	ERDS2TJ104	100k	
R162B	ERDS2TJ104	100k	
R162C	ERDS2TJ104	100k	
R162D	ERDS2TJ104	100k	
R163A	PQRQ25VJ5R6	5.6	
R163B	PQRQ25VJ5R6	5.6	
R163C	PQRQ25VJ5R6	5.6	
R163D	PQRQ25VJ5R6	5.6	
R164A	ERDS2TJ272	2.7k	
R164B	ERDS2TJ272	2.7k	
R164C	ERDS2TJ272	2.7k	
R164D	ERDS2TJ272	2.7k	
R165A	PQ4R10XJ471	470	
R165B	PQ4R10XJ471	470	
R165C	PQ4R10XJ471	470	
R165D	PQ4R10XJ471	470	
R166	PQ4R10XJ101	100	
R167	PQ4R10XJ101	100	
R168	PQ4R10XJ101	100	
R169	PQ4R10XJ101	100	
R170	PQ4R10XJ101	100	
R171	PQ4R10XJ101	100	
R172	PQ4R10XJ101	100	
R173	PQ4R10XJ101	100	
R200A	PQ4R10XJ473	47k	
R200B	PQ4R10XJ473	47k	
R200C	PQ4R10XJ473	47k	
R200D	PQ4R10XJ473	47k	
J151	PQ4R10XJ000	0	
J152	PQ4R10XJ000	0	
J153	PQ4R10XJ000	0	
J154	PQ4R10XJ000	0	
J155A	PQ4R10XJ000	0	
J155B	PQ4R10XJ000	0	
J155C	PQ4R10XJ000	0	
J155D	PQ4R10XJ000	0	
J156A	PQ4R10XJ000	0	
J156B	PQ4R10XJ000	0	
J156C	PQ4R10XJ000	0	
J156D	PQ4R10XJ000	0	

Ref. No.	Part No.	Part Name & Description	Remarks
		(COILS)	
L101A	PQLE106	COIL	S
L101B	PQLE106	COIL	S
L101C	PQLE106	COIL	S
L101D	PQLE106	COIL	S
L102A	PQLE106	COIL	S
L102B	PQLE106	COIL	S
L102C	PQLE106	COIL	S
L102D	PQLE106	COIL	S
L103A	PQLE106	COIL	S
L103B	PQLE106	COIL	S
L103C	PQLE106	COIL	S
L103D	PQLE106	COIL	S
L104A	PQLE106	COIL	S
L104B	PQLE106	COIL	S
L104C	PQLE106	COIL	S
L104D	PQLE106	COIL	S
		(CERAMIC FILTER)	
L105	PQVFTU50MT	CERAMIC FILTER	
		(PHOTO ELECTRIC TRANSDUCERS)	
PC101A	PQVIPC814K	PHOTO COUPLER	S
PC101B	PQVIPC814K	PHOTO COUPLER	S
PC101C	PQVIPC814K	PHOTO COUPLER	S
PC101D	PQVIPC814K	PHOTO COUPLER	S
PC102A	PQVITLP627	PHOTO COUPLER	
PC102B	PQVITLP627	PHOTO COUPLER	
PC102C	PQVITLP627	PHOTO COUPLER	
PC102D	PQVITLP627	PHOTO COUPLER	
		(VARISTORS)	
SA101A	PQVDRA311PT3	VARISTOR(SAUGE ABSOBER)	
SA101B	PQVDRA311PT3	VARISTOR(SAUGE ABSOBER)	
SA101C	PQVDRA311PT3	VARISTOR(SAUGE ABSOBER)	
SA101D	PQVDRA311PT3	VARISTOR(SAUGE ABSOBER)	
SA102A	PQVDRA311PT3	VARISTOR(SAUGE ABSOBER)	
SA102B	PQVDRA311PT3	VARISTOR(SAUGE ABSOBER)	
SA102C	PQVDRA311PT3	VARISTOR(SAUGE ABSOBER)	
SA102D	PQVDRA311PT3	VARISTOR(SAUGE ABSOBER)	
SA103A	PQVDDSV301Y	VARISTOR(SAUGE ABSOBER)	
SA103B	PQVDDSV301Y	VARISTOR(SAUGE ABSOBER)	
SA103C	PQVDDSV301Y	VARISTOR(SAUGE ABSOBER)	
SA103D	PQVDDSV301Y	VARISTOR(SAUGE ABSOBER)	
SA104	PQVDDSV301Y	VARISTOR(SAUGE ABSOBER)	
ZN101A	ERZC07DK820	VARISTOR	S
ZN101B	ERZC07DK820	VARISTOR	S
ZN101C	ERZC07DK820	VARISTOR	S
ZN101D	ERZC07DK820	VARISTOR	S
		(TRANSFORMERS)	
T101A	ETA14Y184AYM	TRANSFORMER	S

Ref. No.	Part No.	Part Name & Description	Remarks
T101B	ETA14Y184AYM	TRANSFORMER	S
T101C	ETA14Y184AYM	TRANSFORMER	S
T101D	ETA14Y184AYM	TRANSFORMER	S

29. REPLACEMENT PARTS LIST (KX-TA123291)

Notes:

1. **The marking (RTL) indicates that the Retention Time is limited for this item.**
   After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing parts and product retention.
   After the end of this period, the assembly will no longer be available.
2. **Important safety notice**
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.
3. **The S mark indicates service standard parts and may differ from production parts.**
4. **RESISTORS & CAPACITORS**
   Unless otherwise specified;
   All resistors are in ohms (Ω). k=1000 Ω , M=1000k Ω
   All capacitors are in MICRO FARADS (μ F). p= μ (μ F)
   ***Type & Wattage of Resistor**

Type

ERC:Solid ERD:Carbon PQ4R:Chip	ERX:Metal Film ERG:Metal Oxide ERO:Metal Film	PQRD:Carbon PQRQ:Fuse ERF:Wire Wound

Wattage

10,16,18:1/8W	14,25,S2:1/4W	12,50,S1:1/2W	1:1W	2:2W	5:5W

ECFD:Semi-Conductor ECQS:Styrol PQCBX,ECUV:Chip ECMS:Mica	ECCD,ECKD,PQCBC,PQVP : Ceramic ECQM,ECQV,ECQE,ECQU,ECQB : Polyester ECEA,ECSZ,ECOS : Electrolytic ECQP : Polypropylene

Voltage

ECQ Type	ECQG ECQV Type	ECSZ Type	Others	
1H : 50V 2A : 100V 2E : 250V 2H : 500V	05 : 50V 1 : 100V 2 : 200V	OF : 3.15V 1A : 10V 1V : 35V OJ : 6.3V	OJ : 6.3V 1A : 10V 1C : 16V 1E,25 : 25V	1V : 35V 50,1H : 50V 1J : 63V 2A : 100V

Ref. No.	Part No.	Part Name & Description	Remarks
		(ICS)	
IC9	PQVIMS7524	IC	S
IC10	PQVIMS7524	IC	S
IC13	PQVILMF90CCN	IC	
IC14	PQVILMF90CCN	IC	
IC17	PSVIMC14548V	IC	S
IC20	PSVIMC14548V	IC	S
IC21	PSVIMC14548V	IC	S
IC24	PQVINJM2901M	IC	S
IC28	PQVINJM4558M	IC	S
IC30	PQVINJM4558M	IC	S
IC37	PQVISN7L38S	IC	S
IC42	PQVISN7L125S	IC	S
IC53	PSVIISD2500D	IC	S
IC54	PSVIISD2500D	IC	S
IC61	PSVIMC14548V	IC	S
IC67	PQVISN7L38S	IC	S
IC70	PQVINJM4558M	IC	S
IC73	PQVISN7H402S	IC	S
IC74	PQVIMC7H74AL	IC	S
IC75	PQVIMC7H74AL	IC	S
IC76	PQVIMB7HU04F	IC	S
IC77	PQVIMB7HU04F	IC	S
IC101	PQVISN7H00S	IC	S
IC102	PQVISN7L04S	IC	S
IC103	PQVISN7L04S	IC	S
IC104	PQVISN7L04S	IC	S
IC105	PQVISN7L640M	IC	
IC106	PSVIT16G1230	IC	S
IC109	PSVIPS600EMT	IC	S
IC110	PQVI6303YP3C	IC	S
IC111	PSWIA123291M	IC	
IC113	PSVIHY6264FD	IC	
		(TRANSISTORS)	
Q1	2SB1237R	TRANSISTOR(SI)	
Q2	2SB1237R	TRANSISTOR(SI)	
Q7	2SC2878	TRANSISTOR(SI)	
Q8	2SC2412K	TRANSISTOR(SI)	
D1	1SS131	DIODE(SI)	
D2	MA4030	DIODE(SI)	
D4	PQVDAK03	DIODE(SI)	S
D5	PQVDAK03	DIODE(SI)	S
D6	MA4056	DIODE(SI)	

Ref. No.	Part No.	Part Name & Description	Remarks
D14	MA723	DIODE(SI)	
D15	MA143	DIODE(SI)	
D16	MA143	DIODE(SI)	
D17	MA143	DIODE(SI)	
D18	MA143	DIODE(SI)	
D21	MA723	DIODE(SI)	
D23	MA143	DIODE(SI)	
D28	MA723	DIODE(SI)	
		(CONNECTOR)	
CN1	PQJS50R45Z	CONNECTOR,50P	
		(CAPACITORS)	
C1	PQCUV1C474KB	0.47	
C2	ECEA1HU100	10	S
C3	PQCUV1C474KB	0.47	
C4	ECEA1HU100	10	S
C9	PQCUV1H101JC	100P	
C13	PQCUV1C474KB	0.47	
C14	PQCUV1C474KB	0.47	
C24	PQCUV1H103KB	0.01	
C25	PQCUV1H103KB	0.01	
C28	PQCUV1H104KB	0.1	S
C31	PQCUV1H104KB	0.1	S
C32	PQCUV1H104KB	0.1	S
C33	PQCUV1H104KB	0.1	S
C34	PQCUV1H104KB	0.1	S
C35	PQCUV1H223KB	0.022	S
C40	PQCUV1H390JC	39P	
C42	PQCUV1H104KB	0.1	S
C50	PQCUV1H104KB	0.1	S
C51	PQCUV1H104KB	0.1	S
C52	ECEA1HU220	22	S
C53	PQCUV1H104KB	0.1	S
C56	ECEA1EU4R7	4.7	S
C57	PQCUV1H104KB	0.1	S
C58	PQCUV1H104KB	0.1	S
C59	ECEA1HU220	22	S
C60	PQCUV1H104KB	0.1	S
C63	ECEA1EU4R7	4.7	S
C73	PQCUV1H150JC	15P	
C74	PQCUV1H150JC	15P	
C75	PQCUV1H150JC	15P	
C76	PQCUV1H150JC	15P	
C77	ECEA1CKA101	100	
C78	ECEA1HKS010	1	

Ref. No.	Part No.	Part Name & Description	Remarks
C79	ECEA1HKS010	1	
C82	EECFE5R5474	0.547	
C84	PQCUV1C474KB	0.47	
C85	PQCUV1H332KB	0.0033	S
C86	PQCUV1H104KB	0.1	S
C87	PQCUV1C474KB	0.47	
C88	ECEA1HU220	22	S
C89	PQCUV1H104KB	0.1	S
C90	PQCUV1H104KB	0.1	S
C95	PQCUV1H223KB	0.022	
C96	PQCUV1H223KB	0.022	
C97	PQCUV1H104KB	0.1	S
C99	PQCUV1H223KB	0.022	
C100	PQCUV1H223KB	0.022	
C101	PQCUV1H223KB	0.022	S
C102	PQCUV1H104KB	0.1	S
C103	PQCUV1H104KB	0.1	S
C104	PQCUV1H104KB	0.1	S
C105	PQCUV1H104KB	0.1	S
C106	PQCUV1H104KB	0.1	S
C107	PQCUV1H102J	0.001	
C108	PQCUV1H104KB	0.1	S
C109	PQCUV1H104KB	0.1	S
C110	PQCUV1H104KB	0.1	S
C111	PQCUV1H104KB	0.1	S
C112	PQCUV1H104KB	0.1	S
C113	PQCUV1H223KB	0.022	S
C114	PQCUV1H223KB	0.022	S
C115	PQCUV1H223KB	0.022	S
C116	PQCUV1H223KB	0.022	S
C117	PQCUV1H223KB	0.022	S
C118	PQCUV1H223KB	0.022	S
C119	PQCUV1H223KB	0.022	S
C120	PQCUV1H181JC	180P	
C121	PQCUV1H181JC	180P	
C122	PQCUV1H223KB	0.022	S
C123	PQCUV1H223KB	0.022	S
C124	PQCUV1H181JC	180P	
C125	PQCUV1H181JC	180P	
C126	PQCUV1H223KB	0.022	S
C127	PQCUV1H223KB	0.022	S
C128	PQCUV1H104KB	0.1	S
C129	PQCUV1H104KB	0.1	S
C130	PQCUV1H223KB	0.022	S
C131	PQCUV1H223KB	0.022	S
C132	PQCUV1H102J	0.001	
C133	PQCUV1H223KB	0.022	S
C134	PQCUV1H223KB	0.022	S

Ref. No.	Part No.	Part Name & Description	Remarks
C135	PQCUV1H223KB	0.022	S
C136	PQCUV1H223KB	0.022	S
C137	PQCUV1H223KB	0.022	S
C138	PQCUV1H223KB	0.022	S
C139	PQCUV1H223KB	0.022	S
C140	PQCUV1H223KB	0.022	S
		(RESISTORS)	
R1	ERDS2TJ102	1K	
R3	PQ4R10XF1003	100K	
R4	PQ4R10XF1003	100K	
R7	PQ4R10XF1003	100K	
R8	PQ4R10XF1003	100K	
R9	PQ4R10XJ103	10K	
R16	PQ4R10XJ105	1M	
R17	PQ4R10XJ820	82	
R18	PQ4R10XJ121	120	
R19	PQ4R10XJ121	120	
R20	PQ4R10XJ121	120	
R21	PQ4R10XJ121	120	
R22	PQ4R10XJ121	120	
R23	PQ4R10XJ152	1.5K	
R25	PQ4R10XJ472	4.7K	
R26	PQ4R10XJ474	470K	
R28	PQ4R10XJ472	4.7K	
R29	PQ4R10XJ474	470K	
R30	PQ4R10XJ000	0	
R32	PQ4R10XJ223	22K	
R33	PQ4R10XJ103	10K	
R35	PQ4R10XJ105	1M	
R36	PQ4R10XF1001	1K	
R37	PQ4R10XF1001	1K	
R38	PQRD1VJ101	100	
R39	PQ4R10XJ103	10K	
R40	PQ4R10XJ182	1.8K	
R41	PQ4R10XJ472	4.7K	
R42	PQ4R10XJ472	4.7K	
R43	PQ4R10XJ334	330K	
R44	PQ4R10XJ222	2.2K	
R45	PQ4R10XJ473	47K	
R46	PQ4R10XJ223	22K	
R47	PQ4R10XJ222	2.2K	
R48	PQ4R10XJ333	33K	
R49	PQ4R10XJ103	10K	
R50	PQ4R10XJ473	47K	
R52	PQ4R10XJ183	18K	
R53	PQ4R10XJ100	10	
R54	PQ4R10XJ102	1K	

Ref. No.	Part No.	Part Name & Description	Remarks
R55	PQ4R10XJ102	1K	
R56	PQ4R10XJ103	10K	
R57	PQ4R10XJ103	10K	
R58	PQ4R10XJ333	33K	
R59	PQ4R10XJ683	68K	
R60	PQ4R10XJ103	10K	
R61	PQ4R10XJ103	10K	
R62	PQ4R10XJ333	33K	
R63	PQ4R10XJ683	68K	
R64	PQ4R10XJ823	82K	
R65	PQ4R10XJ823	82K	
R67	PQ4R10XJ183	18K	
R68	PQ4R10XJ823	82K	
R69	PQ4R10XJ823	82K	
R72	PQ4R10XF1001	1K	
R73	PQ4R10XF1001	1K	
R76	PQ4R10XF1001	1K	
R77	PQ4R10XF1001	1K	
R83	PQ4R10XF3901	3.9K	S
R84	PQ4R10XF3901	3.9K	S
R87	PQ4R10XF3901	3.9K	S
R88	PQ4R10XF3901	3.9K	S
R91	PQ4R10XF4703	470K	
R92	PQ4R10XF4703	470K	
R95	PQ4R10XF4703	470K	
R96	PQ4R10XF4703	470K	
R98	PQ4R10XF1001	1K	
R99	PQ4R10XF1003	100K	
R103	PQ4R10XJ820	82	
R107	PQ4R10XJ121	120	
R108	PQ4R10XJ101	100	
R109	PQ4R10XJ101	100	
R110	PQ4R10XJ101	100	
R111	PQ4R10XJ101	100	
R112	PQ4R10XJ101	100	
R113	PQ4R10XJ101	100	
R114	PQ4R10XJ101	100	
R115	PQ4R10XJ101	100	
R116	PQ4R10XJ333	33K	
R119	PQ4R10XJ223	22K	
R120	PQ4R10XJ560	56	
R121	PQ4R10XJ560	56	
R122	PQ4R10XJ560	56	
R123	PQ4R10XJ560	56	
R124	PQ4R10XJ560	56	
R125	PQ4R10XJ560	56	
R126	PQ4R10XJ560	56	

Ref. No.	Part No.	Part Name & Description	Remarks
R127	PQ4R10XJ560	56	
R128	PQ4R10XJ560	56	
R129	PQ4R10XJ560	56	
R130	PQ4R10XJ560	56	
R131	PQ4R10XJ560	56	
R132	PQ4R10XJ560	56	
R133	PQ4R10XJ560	56	
R134	PQ4R10XJ560	56	
R135	PQ4R10XJ560	56	
R136	PQ4R10XJ560	56	
R137	PQ4R10XJ560	56	
R138	PQ4R10XJ560	56	
R139	PQ4R10XJ560	56	
R140	PQ4R10XJ560	56	
R141	PQ4R10XJ560	56	
R142	PQ4R10XJ560	56	
R143	PQ4R10XJ560	56	
R144	PQ4R10XJ560	56	
R145	PQ4R10XJ560	56	
R146	PQ4R10XJ560	56	
R147	PQ4R10XJ560	56	
R148	PQ4R10XJ560	56	
R149	PQ4R10XJ560	56	
R150	PQ4R10XJ560	56	
R151	PQ4R10XJ560	56	
R152	PQ4R10XJ560	56	
R153	PQ4R10XJ560	56	
R154	PQ4R10XJ560	56	
R155	PQ4R10XJ560	56	
R156	PQ4R10XJ560	56	
R201	PQ4R10XJ222	2.2K	
R202	PQ4R10XJ222	2.2K	
J1	PQ4R10XJ000	0	
J2	PQ4R10XJ000	0	
		(CRYSTAL OSCILLATORS)	
X1	PQVCK8000N3Z	CRYSTAL OSCILLATOR	
X2	PQVCJ7680N5Z	CRYSTAL OSCILLATOR	S
X4	PQVCX3579H5R	CRYSTAL OSCILLATOR	S
		(BATTERY)	
BATT	CR2354-1HF	BATTERY	

Ref. No.	Part No.	Part Name & Description	Remarks
	PQHX10430Z	PVC SHEET FOR CONNECTOR	
	PSQX2485Z	INSTRUCTION BOOK	

30. REPLACEMENT PARTS LIST (KX-TA123293)

Notes:

1. **The marking (RTL) indicates that the Retention Time is limited for this item.**
   After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing parts and product retention.
   After the end of this period, the assembly will no longer be available.
2. **Important safety notice**
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.
3. **The S mark indicates service standard parts and may differ from production parts.**
4. **RESISTORS & CAPACITORS**
   Unless otherwise specified;
   All resistors are in ohms (Ω). k=1000 Ω , M=1000k Ω
   All capacitors are in MICRO FARADS (μ F). p= μ (μ F)
   ***Type & Wattage of Resistor**

Type

ERC:Solid ERD:Carbon PQ4R:Chip	ERX:Metal Film ERG:Metal Oxide ERO:Metal Film	PQRD:Carbon PQRQ:Fuse ERF:Wire Wound

Wattage

10,16,18:1/8W	14,25,S2:1/4W	12,50,S1:1/2W	1:1W	2:2W	5:5W

ECFD:Semi-Conductor ECQS:Styrol PQCBX,ECUV:Chip ECMS:Mica	ECCD,ECKD,PQCBC,PQVP : Ceramic ECQM,ECQV,ECQE,ECQU,ECQB : Polyester ECEA,ECSZ,ECOS : Electrolytic ECQP : Polypropylene

Voltage

ECQ Type	ECQG ECQV Type	ECSZ Type	Others	
1H : 50V 2A : 100V 2E : 250V 2H : 500V	05 : 50V 1 : 100V 2 : 200V	OF : 3.15V 1A : 10V 1V : 35V OJ : 6.3V	OJ : 6.3V 1A : 10V 1C : 16V 1E,25 : 25V	1V : 35V 50,1H : 50V 1J : 63V 2A : 100V

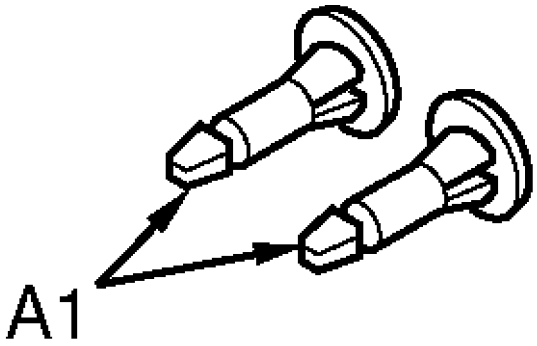
Ref. No.	Part No.	Part Name & Description	Remarks
		(ICS)	
IC301A	C1CB00001176	IC	
IC301B	C1CB00001176	IC	
IC301C	C1CB00001176	IC	
IC301D	C1CB00001176	IC	
IC303A	PQVIMB89371A	IC	S
IC303C	PQVIMB89371A	IC	S
IC304	PQVIMS8C5A2K	IC	S
IC305	PSVILC7366NM	IC	
IC306	C0JBAZ001704	IC	
IC307	C0JBAN000187	IC	
IC308	PSVISNLV273A	IC	S
IC309	PQVITC4066BF	IC	S
IC310	C0JBAZ001762	IC	
IC311	C0JBAE000253	IC	
IC312	C0JBAB000465	IC	
		(DIODES)	
D301A	MA110	DIODE(SI)	
D301B	MA110	DIODE(SI)	
D301C	MA110	DIODE(SI)	
D301D	MA110	DIODE(SI)	
D302A	MA110	DIODE(SI)	
D302B	MA110	DIODE(SI)	
D302C	MA110	DIODE(SI)	
D302D	MA110	DIODE(SI)	
D303A	MA110	DIODE(SI)	
D303B	MA110	DIODE(SI)	
D303C	MA110	DIODE(SI)	
D303D	MA110	DIODE(SI)	
D304A	MA110	DIODE(SI)	
D304B	MA110	DIODE(SI)	
D304C	MA110	DIODE(SI)	
D304D	MA110	DIODE(SI)	
D305A	MA110	DIODE(SI)	
D305B	MA110	DIODE(SI)	
D305C	MA110	DIODE(SI)	
D305D	MA110	DIODE(SI)	
D306A	MA110	DIODE(SI)	
D306B	MA110	DIODE(SI)	
D306C	MA110	DIODE(SI)	
D306D	MA110	DIODE(SI)	
D307A	MA110	DIODE(SI)	
D307B	MA110	DIODE(SI)	
D307C	MA110	DIODE(SI)	
D307D	MA110	DIODE(SI)	
D308A	MA110	DIODE(SI)	
D308B	MA110	DIODE(SI)	
D308C	MA110	DIODE(SI)	
D308D	MA110	DIODE(SI)	
D309A	MA110	DIODE(SI)	
D309B	MA110	DIODE(SI)	
D309C	MA110	DIODE(SI)	

Ref. No.	Part No.	Part Name & Description	Remarks
D309D	MA110	DIODE(SI)	
D310A	MA110	DIODE(SI)	
D310B	MA110	DIODE(SI)	
D310C	MA110	DIODE(SI)	
D310D	MA110	DIODE(SI)	
		(CONNECTORS)	
CN301	PQJP22A45Z	CONNECTOR,22P	
CN302	PQJP08A45Z	CONNECTOR,8P	
CN303	PQJP04A45Z	CONNECTOR,4P	
		(CAPACITORS)	
C301A	ECKD3D471KBP	470p	
C301B	ECKD3D471KBP	470p	
C301C	ECKD3D471KBP	470p	
C301D	ECKD3D471KBP	470p	
C302A	ECKD3D471KBP	470p	
C302B	ECKD3D471KBP	470p	
C302C	ECKD3D471KBP	470p	
C302D	ECKD3D471KBP	470p	
C303A	ECUV1H104ZFV	0.1	
C303B	ECUV1H104ZFV	0.1	
C303C	ECUV1H104ZFV	0.1	
C303D	ECUV1H104ZFV	0.1	
C304A	ECUV1C224ZFV	0.22	S
C304B	ECUV1C224ZFV	0.22	S
C304C	ECUV1C224ZFV	0.22	S
C304D	ECUV1C224ZFV	0.22	S
C305A	ECUV1C473KBV	0.047	S
C305B	ECUV1C473KBV	0.047	S
C305C	ECUV1C473KBV	0.047	S
C305D	ECUV1C473KBV	0.047	S
C307A	ECUV1H223ZFV	0.022	S
C307C	ECUV1H223ZFV	0.022	S
C308	ECUV1H180JCV	18p	S
C309	ECUV1H180JCV	18p	S
C310	ECUV1C104KBV	0.1	S
C311	ECUV1C104KBV	0.1	
C312	ECUV1C104KBV	0.1	
C315	ECUV1H223ZFV	0.022	S
C316	ECUV1H223ZFV	0.022	S
C317	PSCEV1CA330	33p	S
C318	ECUV1H223ZFV	0.022	S
C319	ECUV1H223ZFV	0.022	S
C320	ECUV1H223ZFV	0.022	S
C321	ECUV1H223ZFV	0.022	S
C322	ECUV1H223ZFV	0.022	S
C324	ECUV1C104KBV	0.1	
C325	ECUV1H223ZFV	0.022	S
C326	ECUV1H104JC	0.1	

Ref. No.	Part No.	Part Name & Description	Remarks
		(RESISTORS)	
R301A	ERJ3GEYJ125	1.2M	
R301B	ERJ3GEYJ125	1.2M	
R301C	ERJ3GEYJ125	1.2M	
R301D	ERJ3GEYJ125	1.2M	
R302A	ERJ3GEYJ125	1.2M	
R302B	ERJ3GEYJ125	1.2M	
R302C	ERJ3GEYJ125	1.2M	
R302D	ERJ3GEYJ125	1.2M	
R303A	ERJ3GEYJ823	82k	
R303B	ERJ3GEYJ823	82k	
R303C	ERJ3GEYJ823	82k	
R303D	ERJ3GEYJ823	82k	
R304A	ERJ3GEYJ823	82k	
R304B	ERJ3GEYJ823	82k	
R304C	ERJ3GEYJ823	82k	
R304D	ERJ3GEYJ823	82k	
R305A	ERJ3GEYJ154	150k	
R305B	ERJ3GEYJ154	150k	
R305C	ERJ3GEYJ154	150k	
R305D	ERJ3GEYJ154	150k	
R306A	ERJ3GEYJ154	150k	
R306B	ERJ3GEYJ154	150k	
R306C	ERJ3GEYJ154	150k	
R306D	ERJ3GEYJ154	150k	
R307A	ERJ3GEYJ474	470k	
R307B	ERJ3GEYJ474	470k	
R307C	ERJ3GEYJ474	470k	
R307D	ERJ3GEYJ474	470k	
R308A	ERJ3GEYJ474	470k	
R308B	ERJ3GEYJ474	470k	
R308C	ERJ3GEYJ474	470k	
R308D	ERJ3GEYJ474	470k	
R309A	ERJ3GEYJ184	180k	
R309B	ERJ3GEYJ184	180k	
R309C	ERJ3GEYJ184	180k	
R309D	ERJ3GEYJ184	180k	
R310A	ERJ3GEYJ563	56k	
R310B	ERJ3GEYJ563	56k	
R310C	ERJ3GEYJ563	56k	
R310D	ERJ3GEYJ563	56k	
R311A	ERJ3GEYJ563	56k	
R311B	ERJ3GEYJ563	56k	
R311C	ERJ3GEYJ563	56k	
R311D	ERJ3GEYJ563	56k	
R312A	ERJ3GEYJ474	470k	
R312B	ERJ3GEYJ474	470k	
R312C	ERJ3GEYJ474	470k	
R312D	ERJ3GEYJ474	470k	
R313A	ERJ3GEYJ155	1.5M	
R313B	ERJ3GEYJ155	1.5M	
R313C	ERJ3GEYJ155	1.5M	
R313D	ERJ3GEYJ155	1.5M	

Ref. No.	Part No.	Part Name & Description	Remarks
R314A	ERJ3GEYJ334	330k	
R314B	ERJ3GEYJ334	330k	
R314C	ERJ3GEYJ334	330k	
R314D	ERJ3GEYJ334	330k	
R315A	ERJ3GEYJ103	10k	
R315B	ERJ3GEYJ103	10k	
R315C	ERJ3GEYJ103	10k	
R315D	ERJ3GEYJ103	10k	
R316A	ERJ3GEYJ104	100k	
R316B	ERJ3GEYJ104	100k	
R316C	ERJ3GEYJ104	100k	
R316D	ERJ3GEYJ104	100k	
R317A	ERJ3GEYJ394	390k	
R317B	ERJ3GEYJ394	390k	
R317C	ERJ3GEYJ394	390k	
R317D	ERJ3GEYJ394	390k	
R318A	ERJ3GEYJ103	10k	
R318B	ERJ3GEYJ103	10k	
R318C	ERJ3GEYJ103	10k	
R318D	ERJ3GEYJ103	10k	
R322A	ERJ3GEYJ563	56k	
R322B	ERJ3GEYJ563	56k	
R322C	ERJ3GEYJ563	56k	
R322D	ERJ3GEYJ563	56k	
R331A	ERJ3GEYJ473	47k	
R331C	ERJ3GEYJ473	47k	
R332A	ERJ3GEYJ473	47k	
R332C	ERJ3GEYJ473	47k	
R333A	ERJ3GEYJ473	47k	
R333C	ERJ3GEYJ473	47k	
R334A	ERJ3GEYJ473	47k	
R334C	ERJ3GEYJ473	47k	
R335	ERJ3GEYJ105	1M	
R336	ERJ3GEYJ473	47k	
R337	ERJ3GEYJ473	47k	
R339	ERJ3GEYJ103	10k	
R340	ERJ3GEYJ563	56k	
R341	ERJ3GEY0R00	0	
R342	ERJ3GEY0R00	0	
R343	ERJ3GEY0R00	0	
J304	ERJ3GEY0R00	0	
		(CRYSTAL OSCILLATORS)	
X301	PSVCYY0358M3	CRYSTAL OSCILLATOR	S
X302	PSVCC0041L	CRYSTAL OSCILLATOR	S

Ref. No.	Part No.	Part Name & Description	Remarks
A1	PQHR10181Z	SPACER	
	PSQW1761Z	LEAFLET	



31. SCHEMATIC DIAGRAM (KX-TA1232)

31.1. CPU BOARD

31.2. EXTENSION BOARD

31.2.1. NO.1

31.2.2. NO.2

31.3. CO BOARD

31.4. SMDR/LED BOARD

31.5. MOTHER BOARD

32. PRINTED CIRCUIT BOARD (KX-TA1232)

32.1. CPU BOARD

32.1.1. CONPONENT VIEW

32.1.2. BOTTOM VIEW

32.2. EXTENSION BOARD

32.2.1. CONPONENT VIEW

32.2.2. BOTTOM VIEW

32.3. CO BOARD

32.3.1. CONPONENT VIEW

32.3.2. BOTTOM VIEW

32.4. SMDR/LED BOARD

32.4.1. CONPONENT VIEW

32.5. MOTHER BOARD

32.5.1. COMPONENT VIEW

32.5.2. BOTTOM VIEW

33. SCHEMATIC DIAGRAM (KX-TA123260)

34. PRINTED CIRCUIT BOARD (KX-TA123260)

34.1. CONPONENT VIEW

34.2. BOTTOM VIEW

35. SCHEMATIC DIAGRAM (KX-TA123270)

35.1. NO.1

35.2. NO.2

35.3. NO.3

36. PRINTED CIRCUIT BOARD (KX-TA123270)

36.1. CONPONENT VIEW (NO.1)

36.2. BOTTOM VIEW (NO.1)

36.3. CONPONENT VIEW (NO.2)

36.4. BOTTOM VIEW (NO.2)

37. SCHEMATIC DIAGRAM (KX-TA123280)

38. PRINTED CIRCUIT BOARD (KX-TA123280)

38.1. CONPONENT VIEW

38.2. BOTTOM VIEW

39. SCHEMATIC DIAGRAM (KX-TA123291)

40. PRINTED CIRCUIT BOARD (KX-TA123291)

40.1. CONPONENT VIEW

40.2. BOTTOM VIEW

41. SCHEMATIC DIAGRAM (KX-TA123293)

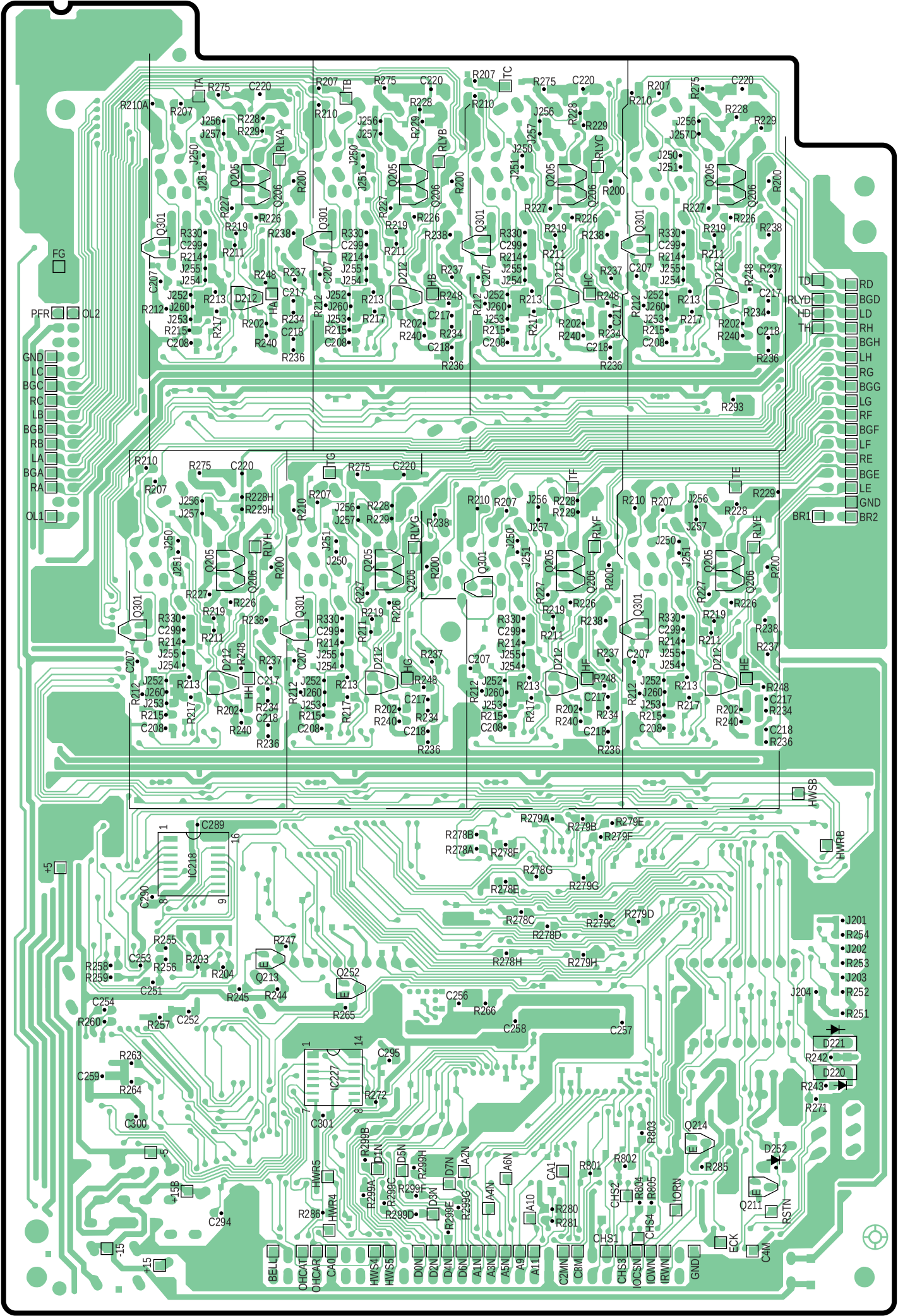
42. PRINTED CIRCUIT BOARD (KX-TA123293)

42.1. CONPONENT VIEW

42.2. BOTTOM VIEW

43. SCHEMATIC DIAGRAM FOR PRINTING WITH A4 SIZE

A,KXTA1232MUK / KXTA123260MUK / KXTA123270MUK / KXTA123280MUK / KXTA123291MUK / KXTA123293MUK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LC
BGC
RC
LB
BGB
RB
LA
BGA
RA
OL1
RD
BGD
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LH
RG
BGG
LG
RF
BGF
LF
RE
BGE
LE
GND
BR2
TD
RLYD
HD
TH
BR1
TA
TB
TC
TG
HA
HB
HC
HD
HE
HF
HG
HH
RLYA
RLYB
RLYC
RLYD
RLYE
RLYF
RLYG
RLYH
R210A
R293
HWSB
HWRB
+5
-5
+15B
-15
+15
C294
C300
C301
C289
C290
IC218
IC227
R278A
R278B
R278C
R278D
R278E
R278F
R278G
R278H
R279A
R279B
R279C
R279D
R279E
R279F
R279G
R279H
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Q252
R285
Q214
Q211
D252
D221
D220
R271
J201
J202
J203
J204
R251
R252
R253
R254
BELL
OHOAT
OHOAR
CA0
HWR5
HWR4
HWS4
HWS5
D0N
D2N
D4N
D6N
A1N
A3N
A5N
A9
A11
C2MN
C8M
CHS3
IOCSN
IOWN
IRWN
GND
CHS1
CHS2
CHS4
IORN
ECK
C4M
RSTN
CA1
A2N
A4N
A6N
A10
D1N
D3N
D5N
D7N
R286
R299A
R299B
R299C
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R299F
R299G
R299H
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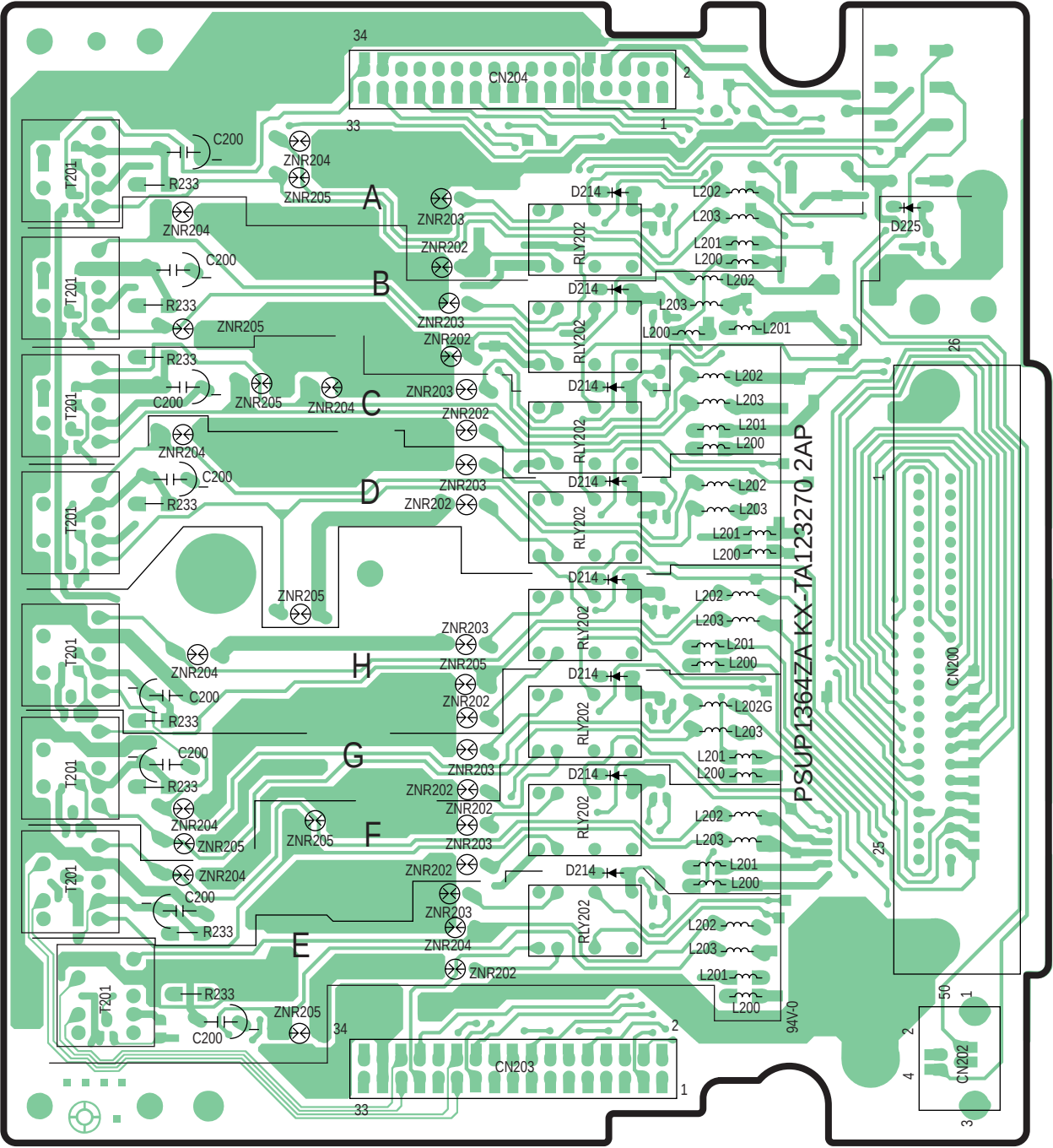
R802
R803
R804
R805


PSUP1364ZA KX-TA123270 2AP
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CN203
CN200
CN202
A
B
C
D
E
F
G
H
T201
R233
C200
ZNR204
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ZNR203
ZNR202
RLY202
D214
D225
L202
L203
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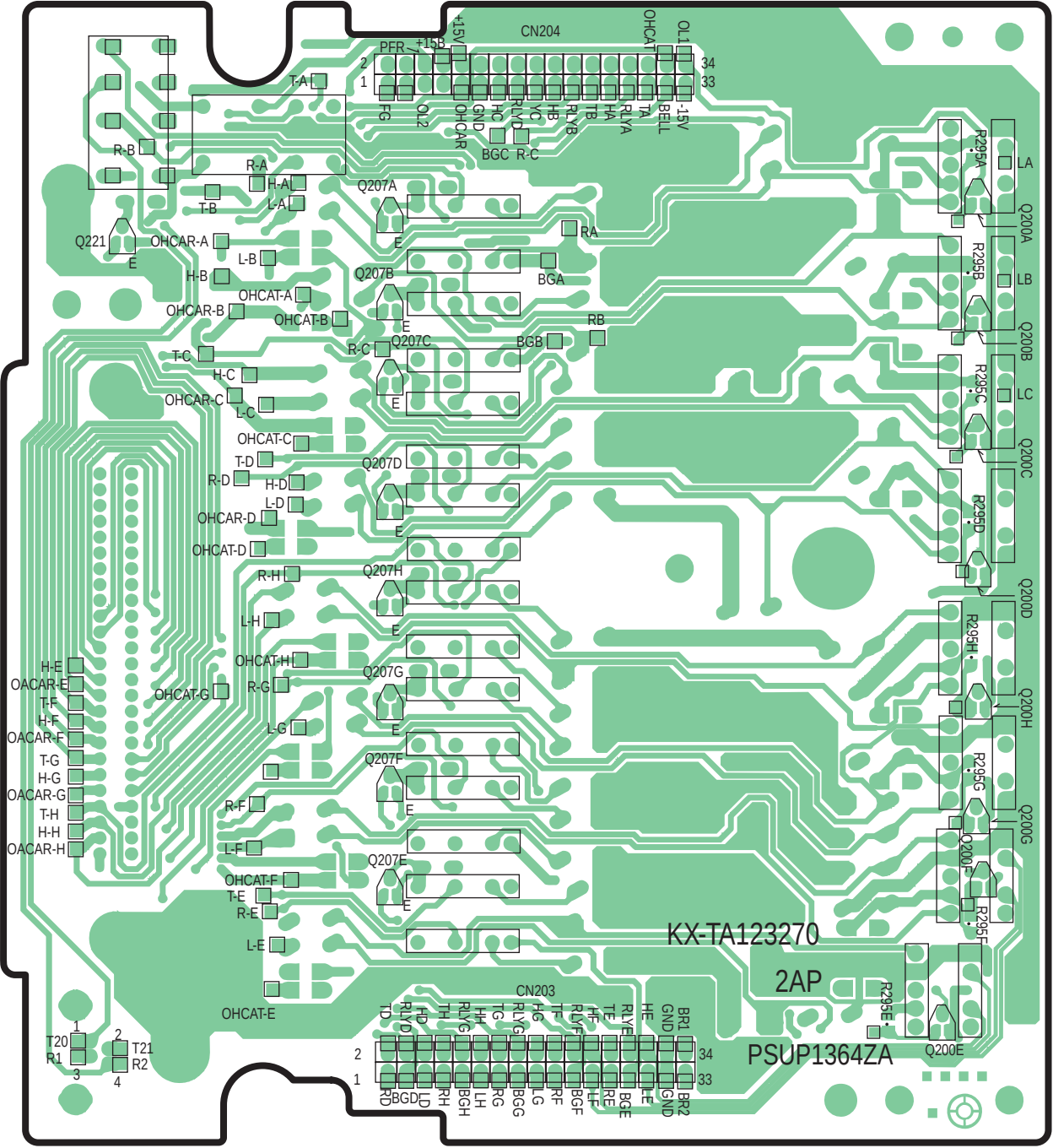
L200
L202G
94V-0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PFR
+15B
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34
33
2
1
FG
OL2
OHCAR
GND
HC
RLYC
YC
HB
RLYB
TB
HA
RLYA
TA
BELL
-15V
BGC
R-C
T-A
R-B
R-A
H-A
L-A
T-B
Q221
E
OHCAR-A
L-B
H-B
OHCAT-A
OHCAR-B
OHCAT-B
T-C
H-C
OHCAR-C
L-C
OHCAT-C
T-D
R-D
H-D
L-D
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OHCAT-H
R-G
OHCAT-G
L-G
R-F
L-F
OHCAT-F
T-E
R-E
L-E
OHCAT-E
H-E
OACAR-E
T-F
H-F
OACAR-F
T-G
H-G
OACAR-G
T-H
H-H
OACAR-H
Q207A
Q207B
Q207C
Q207D
Q207H
Q207G
Q207F
Q207E
RA
BGA
RB
BGB
R295A
R295B
R295C
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R295F
R295E
Q200F
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HF
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RF
LG
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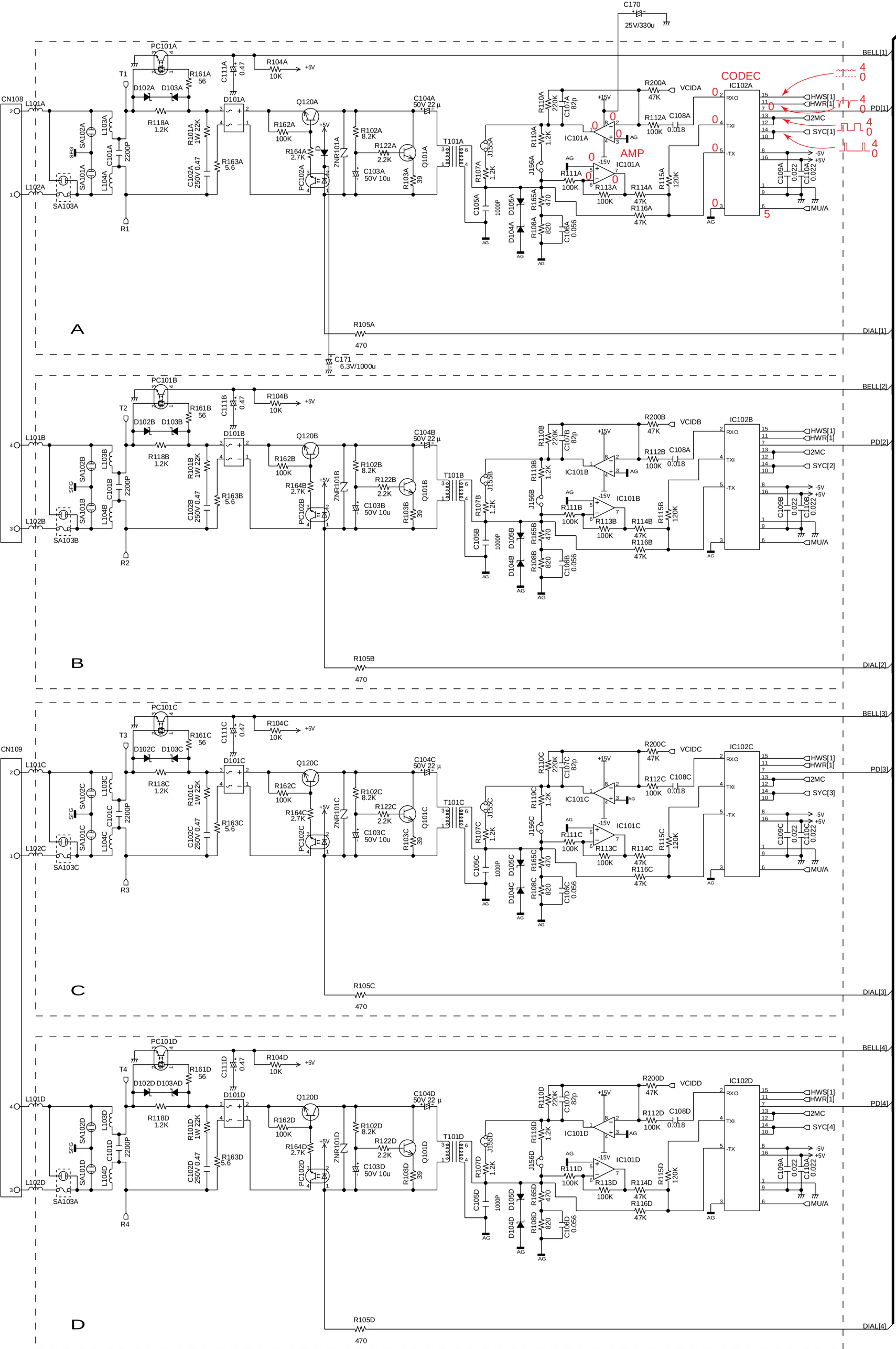
LD
BGD
RD
T20
R1
T21
R2
KX-TA123270
2AP
PSUP1364ZA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B
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D
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CN109
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L102B
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SA103A
SA103B
SA103C
SA102A
SA101A
SA102B
SA101B
SA102C
SA101C
SA102D
SA101D
SFG
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L104A
L103B
L104B
L103C
L104C
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C101A
C101B
C101C
C101D
2200P
T1
T2
T3
T4
R1
R2
R3
R4
PC101A
PC101B
PC101C
PC101D
D102A
D103A
D102B
D103B
D102C
D103C
D102D
D103AD
R161A
56
R161B
R161C
R161D
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R118B
R118C
R118D
C111A
C111B
C111C
C111D
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R104A
10K
R104B
R104C
R104D
+5V
D101A
D101B
D101C
D101D
R101A
1W 22K
R101B
R101C
R101D
C102A
250V 0.47
C102B
C102C
C102D
R163A
5.6
R163B
R163C
R163D
Q120A
Q120B
Q120C
Q120D
R162A
100K
R162B
R162C
R162D
R164A
2.7K
R164B
R164C
R164D
PC102A
PC102B
PC102C
PC102D
ZNR101A
ZNR101B
ZNR101C
ZNR101D
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R102B
R102C
R102D
R122A
2.2K
R122B
R122C
R122D
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C103B
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Q101D
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T101B
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T101D
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J156D
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C105C
C105D
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D105C
D105D
D104A
D104B
D104C
D104D
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470
R165B
R165C
R165D
R108A
820
R108B
R108C
R108D
C106A
0.056
C106B
C106C
C106D
AG
C170
25V/330u
C171
6.3V/1000u
R105A
R105B
R105C
R105D
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220K
R110B
R110C
R110D
C107A
82p
C107B
C107C
C107D
+15V
-15V
IC101A
IC101B
IC101C
IC101D
AMP
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47K
R200B
R200C
R200D
VCIDA
VCIDB
VCIDC
VCIDD
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100K
R112B
R112C
R112D
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C108B
C108C
C108D
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100K
R111B
R111C
R111D
R113A
100K
R113B
R113C
R113D
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47K
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R114C
R114D
R115A
120K
R115B
R115C
R115D
R116A
47K
R116B
R116C
R116D
IC102A
IC102B
IC102C
IC102D
RXO
TXI
-TX
-5V
+5V
MU/A
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C109B
C109C
C109D
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C110B
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C110D
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HWR[1]
2MC
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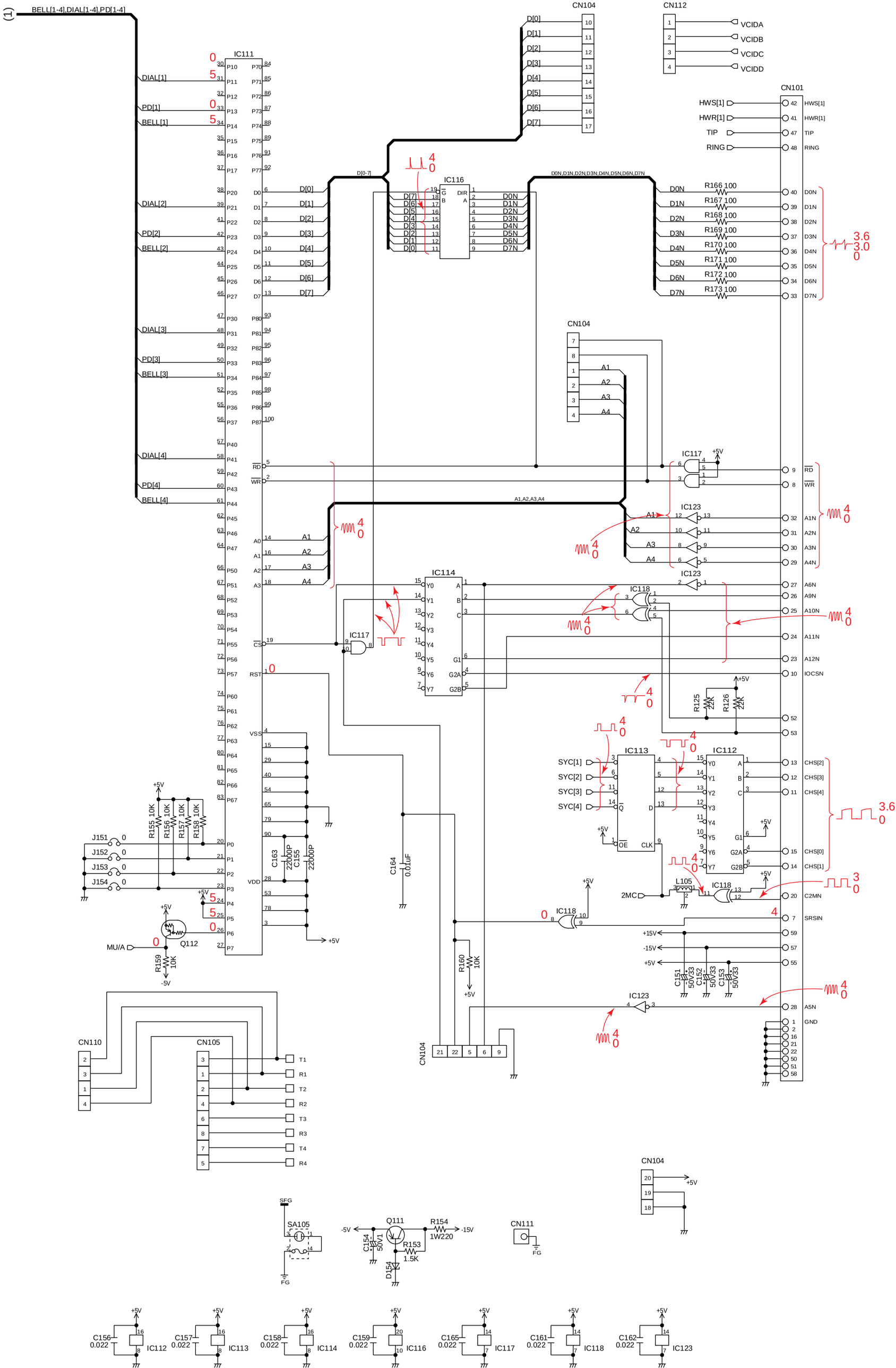
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WR
RST
CS
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A2
A3
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D2
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D4
D5
D6
D7
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CN112
VCIDA
VCIDB
VCIDC
VCIDD
CN101
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HWR[1]
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R167 100
R168 100
R169 100
R170 100
R171 100
R172 100
R173 100
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IC117
IC123
IC114
IC118
IC113
IC112
R125 22K
R126 22K
SYC[1]
SYC[2]
SYC[3]
SYC[4]
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L105
C163 2200P
C155 2200P
C164 0.01UF
R155 10K
R156 10K
R157 10K
R158 10K
J151
J152
J153
J154
Q112
MU/A
R159 10K
R160 10K
C151 50V33
C152 50V33
C153 50V33
CN110
CN105
T1
R1
T2
R2
T3
R3
T4
R4
SFG
SA105
FG
Q111
R154 1W220
R153 1.5K
C154 50V1
D154
CN111
C156 0.022
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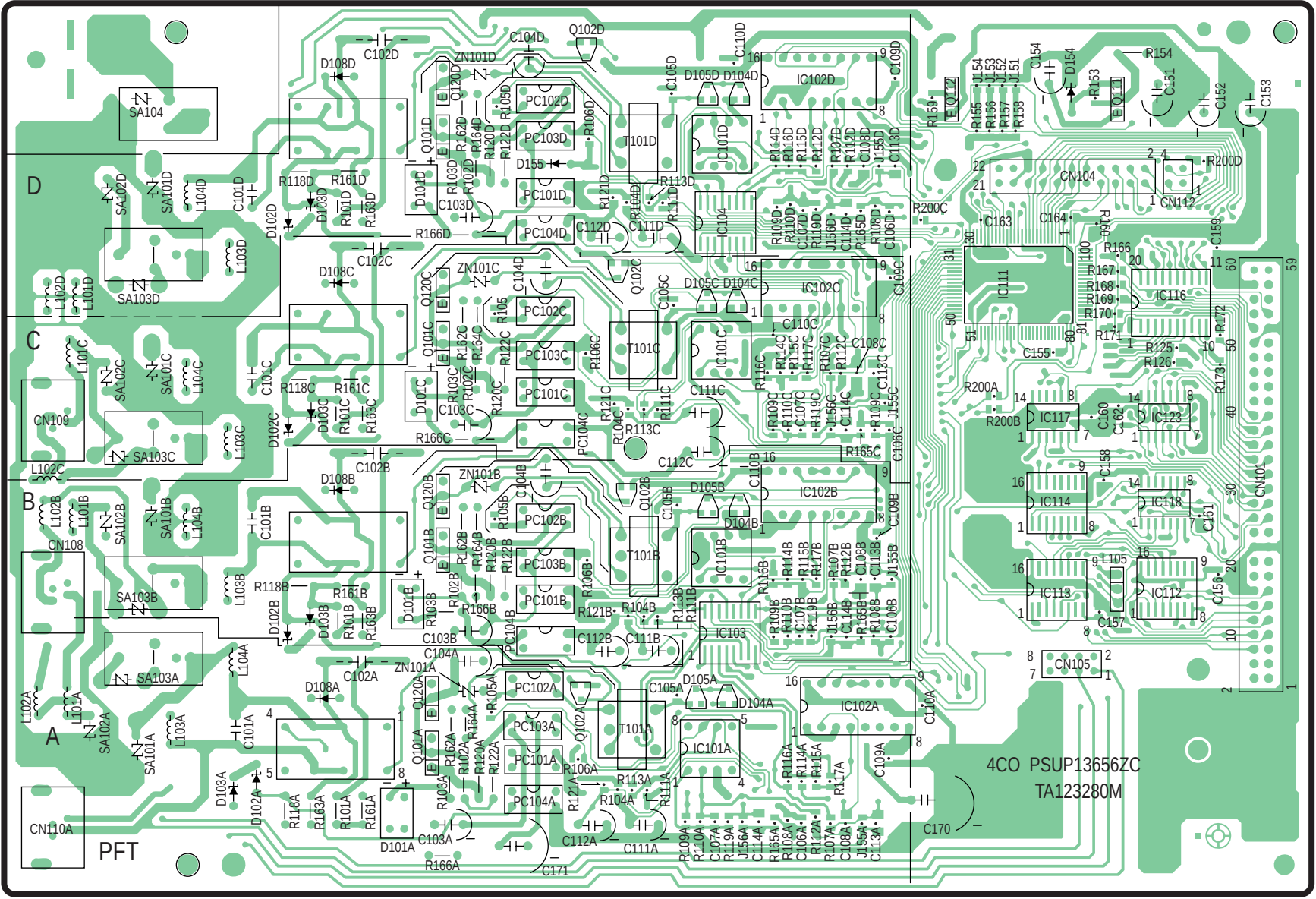
-5V
+15V
-15V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D105D D104D
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SA104
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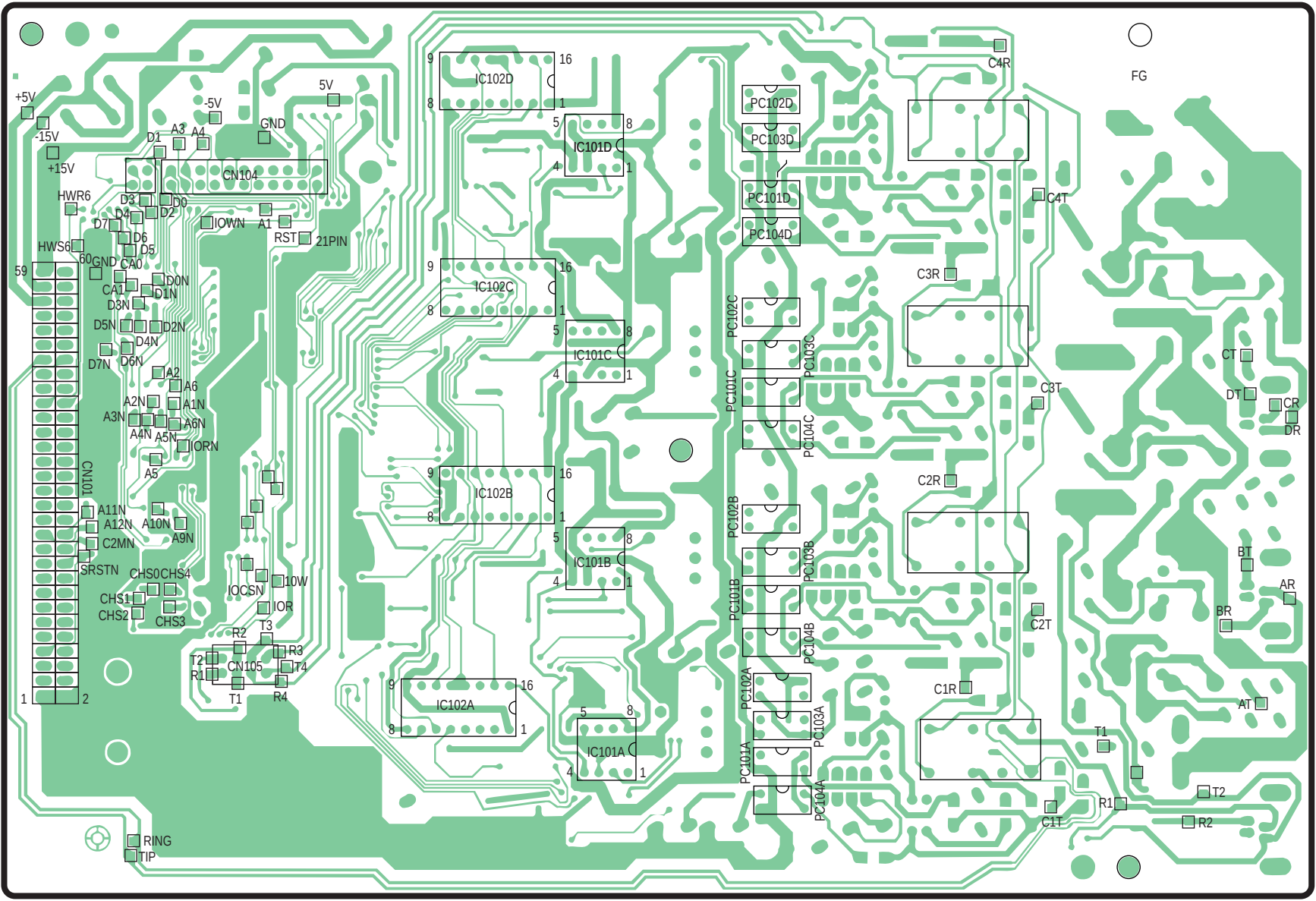
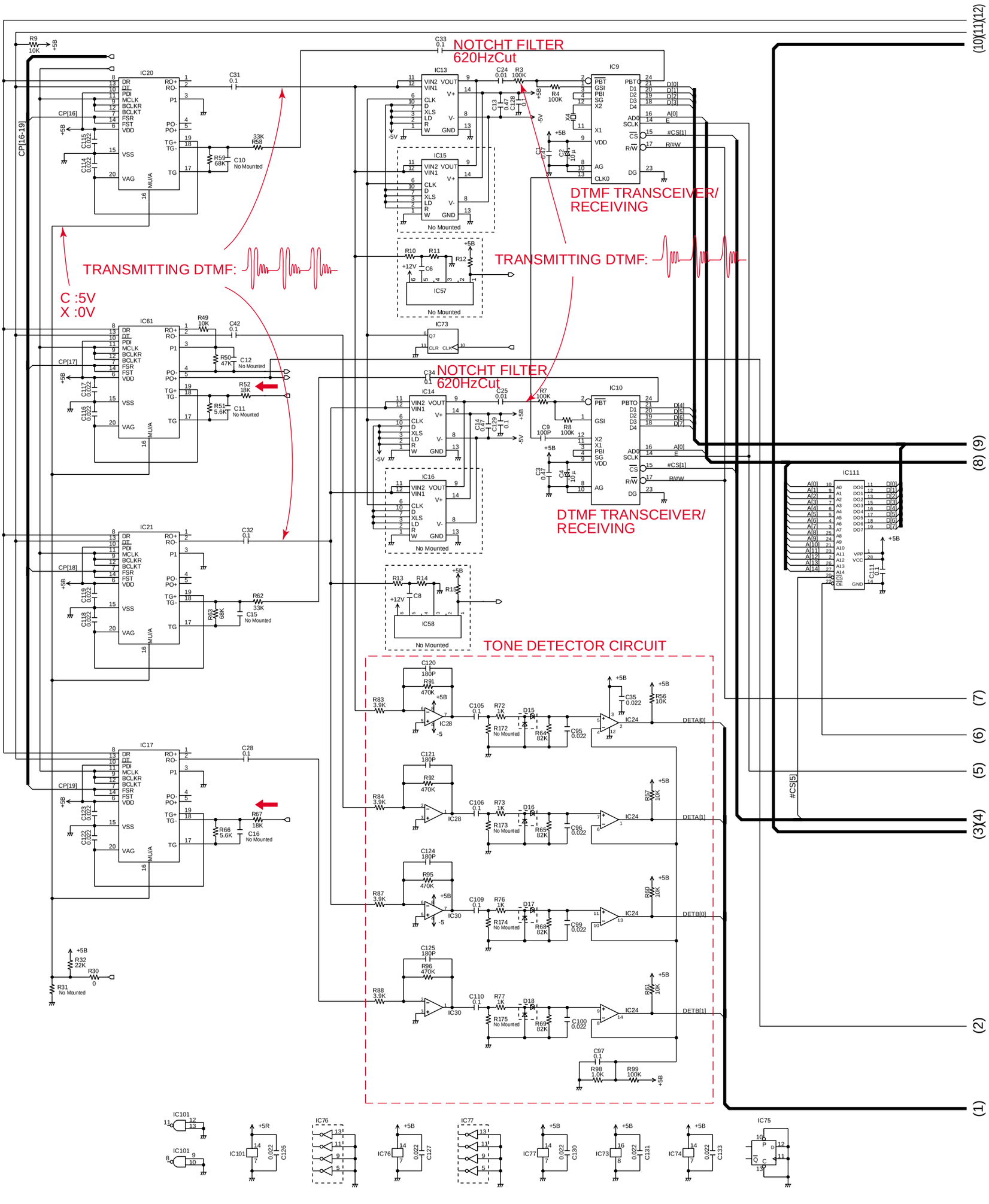

+5V
-15V
+15V
-5V
5V
GND
CN104
HWR6
HWS6
CN101
CN105
IOWN
IORN
IOCSN
IOR
10W
RST
21PIN
SRSTN
CHS0
CHS1
CHS2
CHS3
CHS4
RING
TIP
IC102D
IC101D
IC102C
IC101C
IC102B
IC101B
IC102A
IC101A
PC102D
PC103D
PC101D
PC104D
PC102C
PC103C
PC101C
PC104C
PC102B
PC103B
PC101B
PC104B
PC102A
PC103A
PC101A
PC104A
C4R
C4T
C3R
C3T
C2R
C2T
C1R
C1T
FG
CT
DT
CR
DR
BT
AR
BR
AT
T1
T2
R1
R2
T3
T4
R3
R4


NOTCHT FILTER
620HzCut
DTMF TRANSCEIVER/
RECEIVING
TRANSMITTING DTMF:
C :5V
X :0V
TONE DETECTOR CIRCUIT
CP[16-19]
CP[16]
CP[17]
CP[18]
CP[19]
IC20
IC61
IC21
IC17
IC13
IC15
IC14
IC16
IC9
IC10
IC111
IC57
IC58
IC73
IC28
IC30
IC24
No Mounted
DETA[0]
DETA[1]
DETB[0]
DETB[1]
#CS[5]
#CS[1]
R/#W
A[0]
E
D[0]
D[1]
D[2]
D[3]
D[4]
D[5]
D[6]
D[7]
(10)(11)(12)
(8) (9)
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(5)
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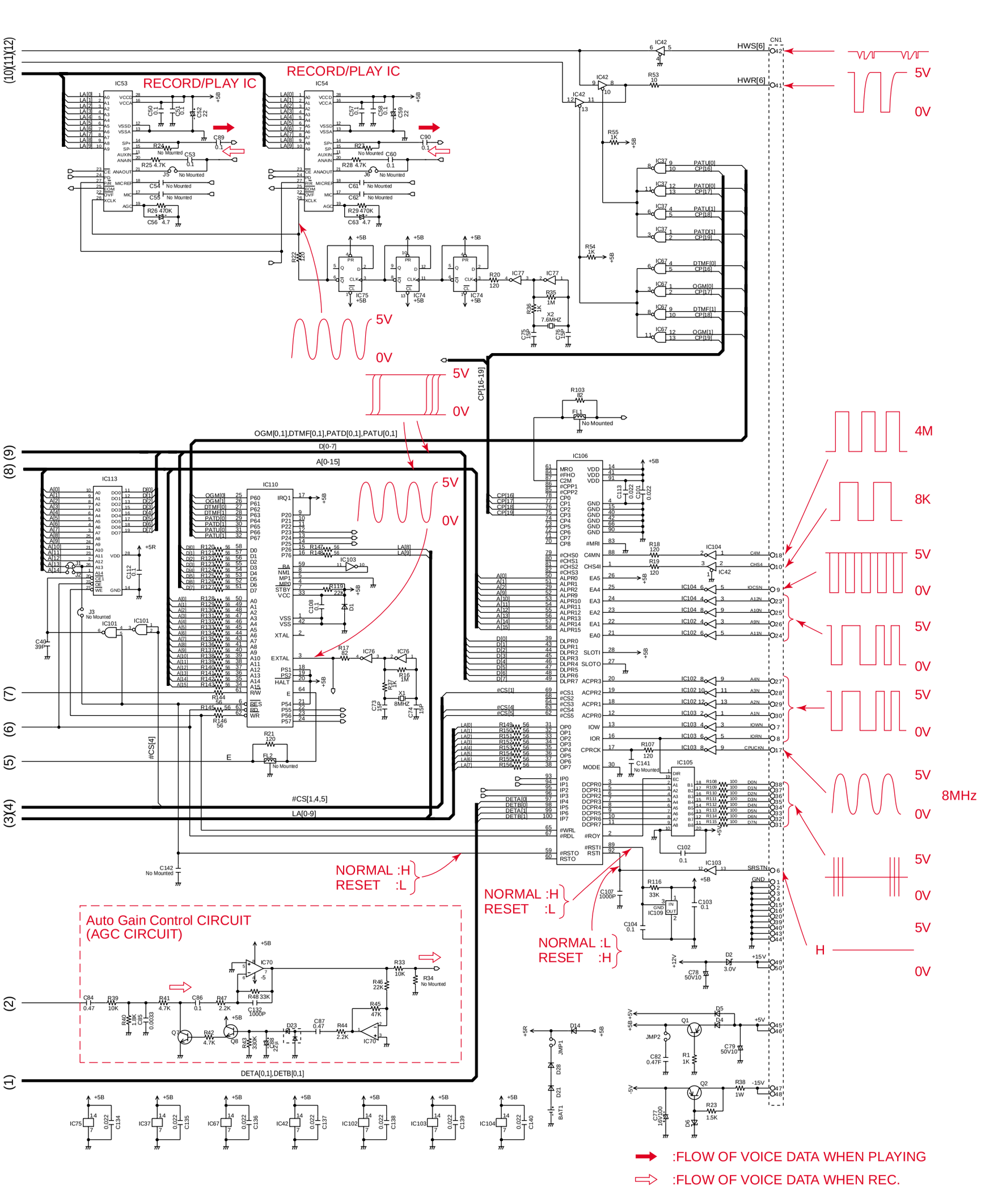
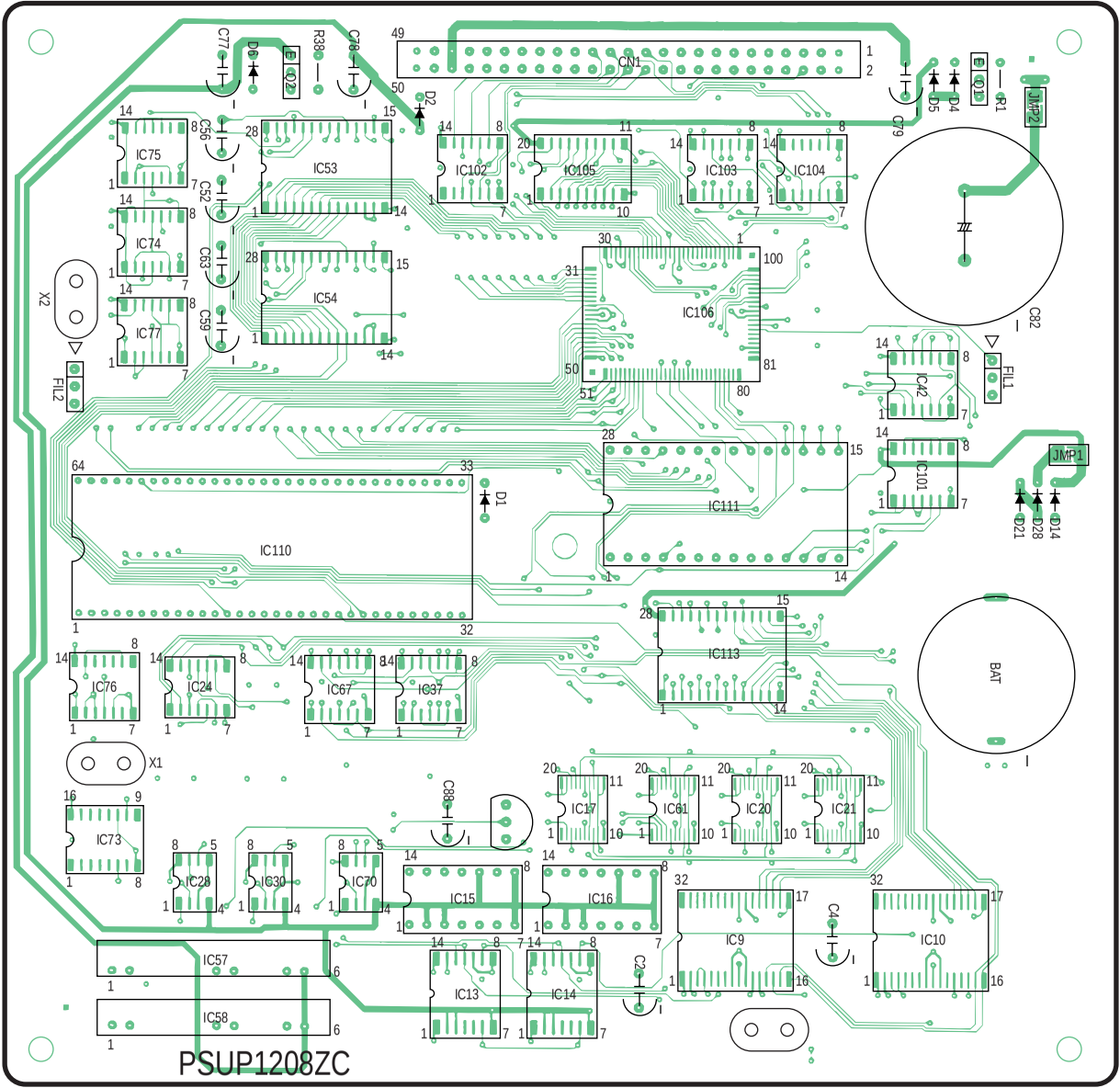
(2)
(1)


RECORD/PLAY IC
RECORD/PLAY IC
IC53
IC54
IC106
IC113
IC110
IC101
IC103
IC104
IC105
IC109
IC42
IC37
IC67
IC75
IC74
IC77
IC76
CN1
HWS[6]
HWR[6]
5V
0V
4M
8K
8MHz
H
CP[16-19]
OGM[0,1],DTMF[0,1],PATD[0,1],PATU[0,1]
D[0-7]
A[0-15]
#CS[4]
#CS[1,4,5]
LA[0-9]
DETA[0,1],DETB[0,1]
NORMAL :H
RESET :L
NORMAL :H
RESET :L
NORMAL :L
RESET :H
Auto Gain Control CIRCUIT
(AGC CIRCUIT)
:FLOW OF VOICE DATA WHEN PLAYING
:FLOW OF VOICE DATA WHEN REC.


CN1
JMP1
JMP2
BAT
X1
X2
IC75
IC74
IC77
IC53
IC54
IC102
IC105
IC103
IC104
IC106
IC42
IC101
IC111
IC110
IC113
IC76
IC24
IC67
IC37
IC73
IC28
IC30
IC70
IC15
IC16
IC17
IC61
IC20
IC21
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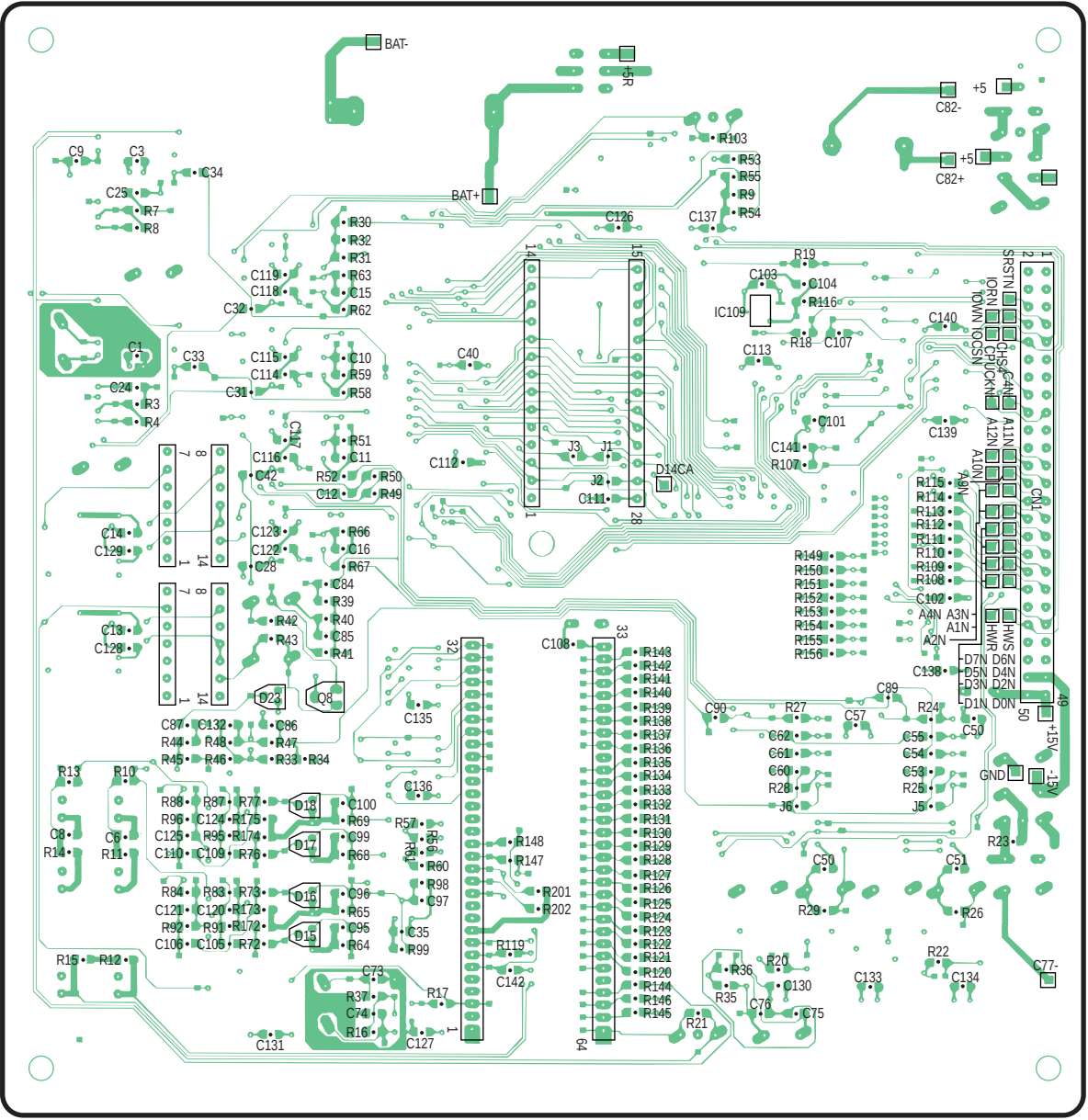
IC13
IC14
IC57
IC58
PSUP1208ZC


BAT-
+5R
BAT+
C82-
+5
C82+
+5
C9
C3
C34
C25
R7
R8
R103
R53
R55
R9
R54
C137
C126
R30
R32
R31
R63
C119
C118
C15
R62
C32
C1
C33
C115
C114
C10
R59
C31
R58
C24
R3
R4
C40
C112
J3
J1
J2
C111
D14CA
R19
C103
C104
R116
IC109
R18
C107
C113
C140
C101
C139
C141
R107
SRSTN
IORN
TOWN
TOCSN
CHS
CHUCKN
A4N
A11N
A12N
A10N
A9N
CN1
C147
R51
C116
C42
R52
R50
C12
R49
C14
C129
C123
C122
C28
R66
C16
R67
C84
R39
R42
R40
R43
C85
R41
C13
C128
D23
Q8
C87
C132
C86
R44
R48
R47
R45
R46
R33
R34
C135
C136
C108
R143
R142
R141
R140
R139
R138
R137
R136
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R131
R130
R129
R128
R127
R126
R125
R124
R123
R122
R121
R120
R144
R146
R145
R21
R115
R114
R113
R112
R111
R110
R109
R108
C102
A4N
A3N
A1N
A2N
HWS
HWR
D7N
D6N
D5N
D4N
D3N
D2N
D1N
D0N
C138
C89
C90
R27
C57
R24
C50
C62
C55
C61
C54
C60
C53
R28
R25
J6
J5
GND
+15V
-15V
R13
R10
R88
R87
R77
D18
C100
R96
C124
R175
R69
C8
C6
C125
R95
R174
D17
C99
R14
R11
C110
C109
R76
R68
R57
R61
R60
R84
R83
R73
D16
C96
R98
C121
C120
R173
R65
R97
R92
R91
R172
C95
C35
C106
C105
R72
R64
R99
R148
R147
R201
R202
R119
C142
R29
C50
C51
R26
R23
C77-
R22
C134
C133
R36
R20
C130
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C75
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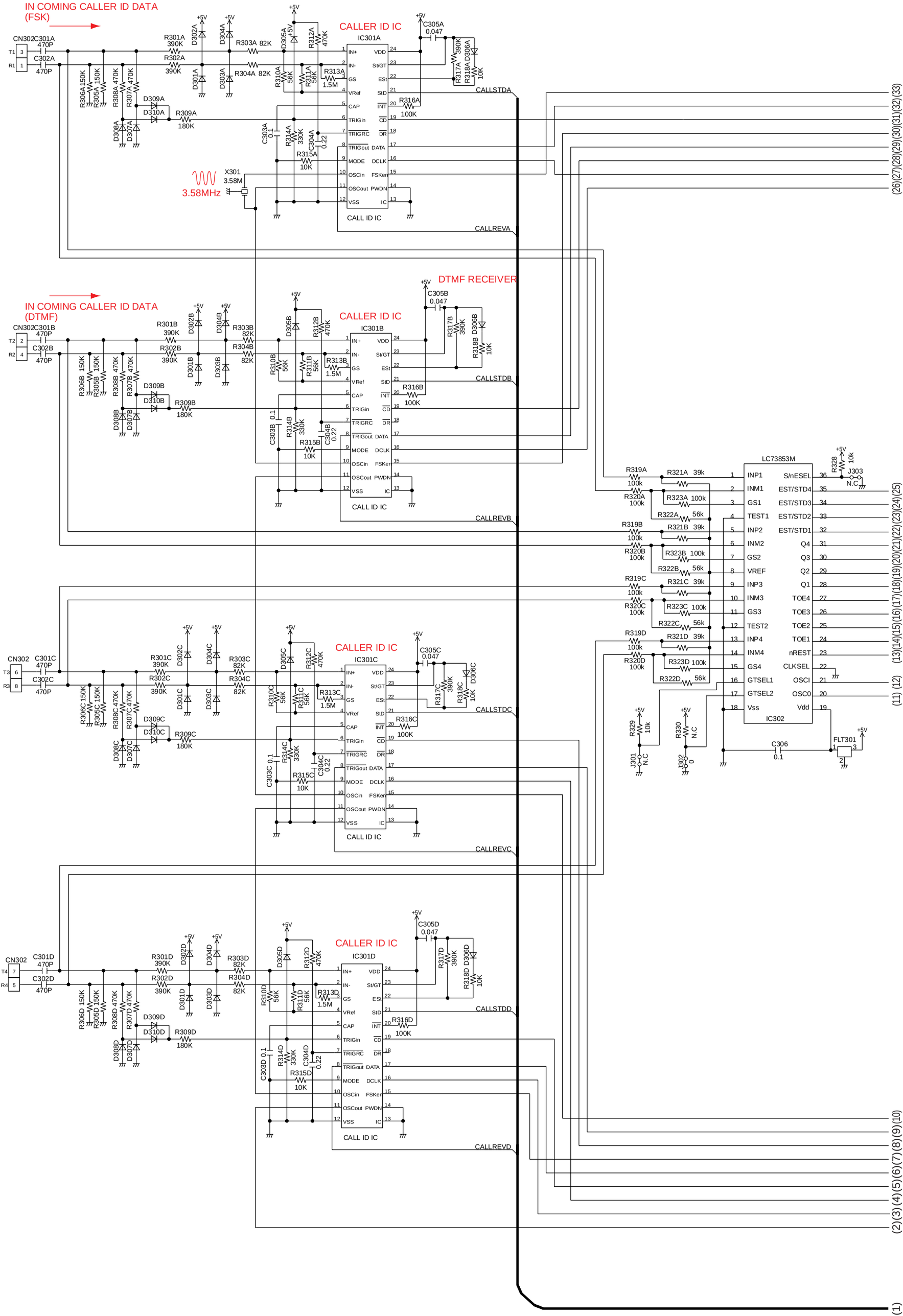
C74
R16
R17
C131
C127
C142


IN COMING CALLER ID DATA (FSK)
CALLER ID IC
IC301A
DTMF RECEIVER
IN COMING CALLER ID DATA (DTMF)
IC301B
IC301C
IC301D
CALL ID IC
3.58MHz
X301
CALLSTDA
CALLREVA
CALLSTDB
CALLREVB
CALLSTDC
CALLREVC
CALLSTDD
CALLREVD
LC73853M
IC302
J303 N.C
FLT301
C306 0.1
R328 10k
R329 10k
R330 N.C
J301 N.C
J302 0
(33)(32)(31)(30)(29)(28)(27)(26)
(25)(24)(23)(22)(21)(20)(19)(18)(17)(16)(15)(14)(13)
(12)
(11)
(10)(9)(8)(7)(6)(5)(4)(3)(2)
(1)

SERIAL-PARALLEL CONVERT IC

IC303A

DA1,DA2

CN301 PQJP22A45ZA-HT

R331A 47K
R332A 47K
R333A 47K
R334A 47K

TRNDT1 RTS1 DTR1 RCVDT1 CTS1 DSR1 TRNDT2 RTS2 DTR2 RCVDT2 CTS2 DSR2 TRNCLK1 RCVCLK1 TRNCLK2 RCVCLK2 CLK VCC GND

CS1 CS2 RSLCT0 RSLCT1 DB0 DB1 DB2 DB3 DB4 DB5 DB6 DB7 W R RST TRNRDY1 RCVRDY1 SYNC/BRX1 TRNEMP1 TRNRDY2 RCVRDY2 SYNC/BRX2 TRNEMP2

CS0N CS1N DA1 DA2 D0 D1 D2 D3 D4 D5 D6 D7 IOWN IORN RST

C307A 0.022

IC312 X302 4.9152M R335 1M C308 18P C309 18P

4.9152MHz

IC306 IC307 74LS138 IC308 SN74LV273 IC310 IC311 IC312

C315 0.022

C317 10V33μ

DTMFG DETECTOR CONTROL

R324 22STDD
R325 22STDC
R326 22STDB
R327 22STDA

CALLSTDA CALLSTDB CALLSTDC CALLSTDD CALLREVA CALLREVB CALLREVC CALLREVD STDA STDB STDC STDD

D[3] D[2] D[1] D[0] TOED TOEC TOEB TOEA

IC304 PQVIMS8C5A2G

ADRESS

DATA

ICRN IOWN

G/A

C310 0.1 C311 0.1 C312 0.1

TOEC TOED DTMFGA DTMFGB DTMFGC DTMFGD RST

C316 0.022

IC305

R337 47K R336 47K

COL1 COL2 COL3 COL4 ROW1 ROW2 ROW3 ROW4 TONE CD XMIT MUTE OSCI NC OSCO

C326 0.1

IC309 CN303 PQJP04A45ZA-HT

DTMFGD DTMFGC DTMFGB DTMFGA

J304 N.C

C324 0.1

IC303C

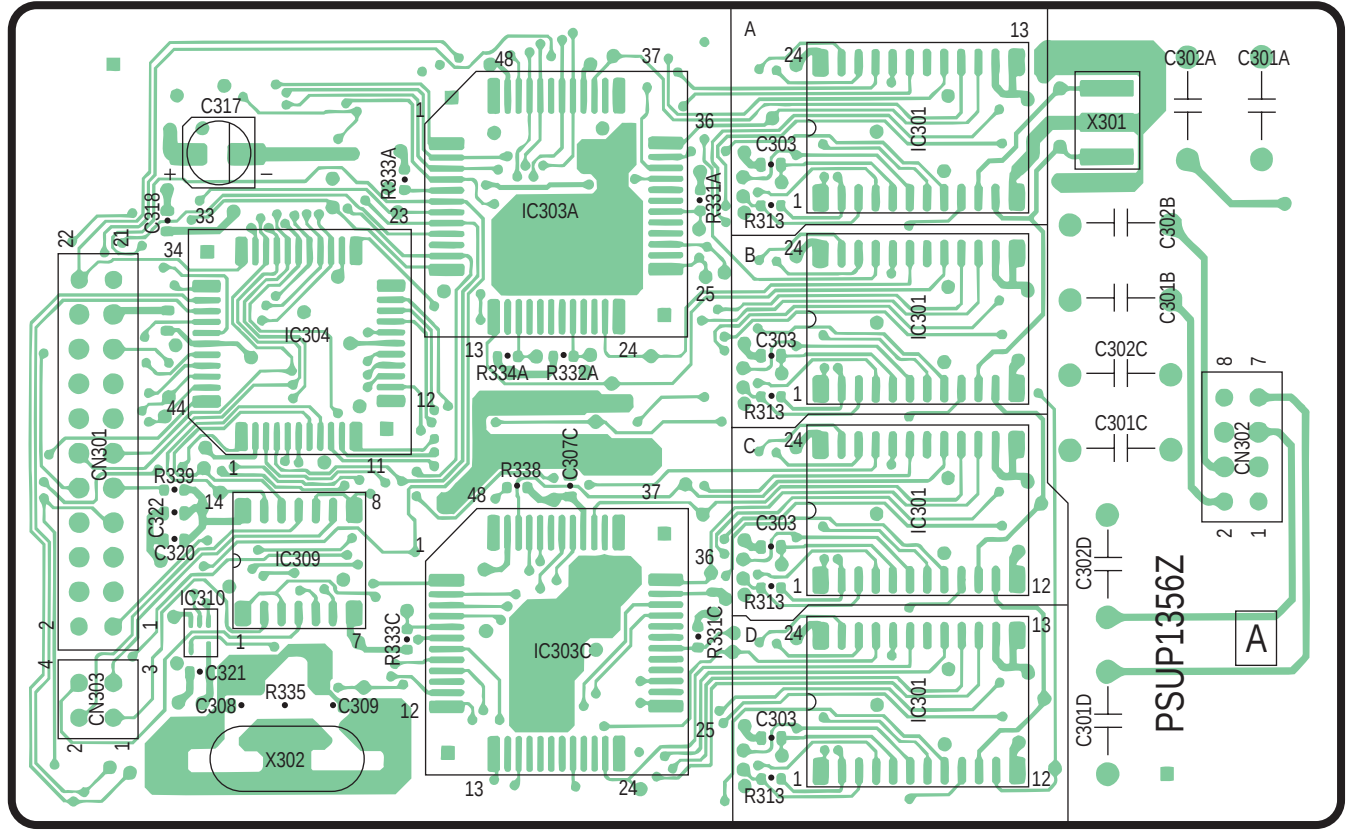
R331C 47K
R332C 47K
R333C 47K
R334C 47K

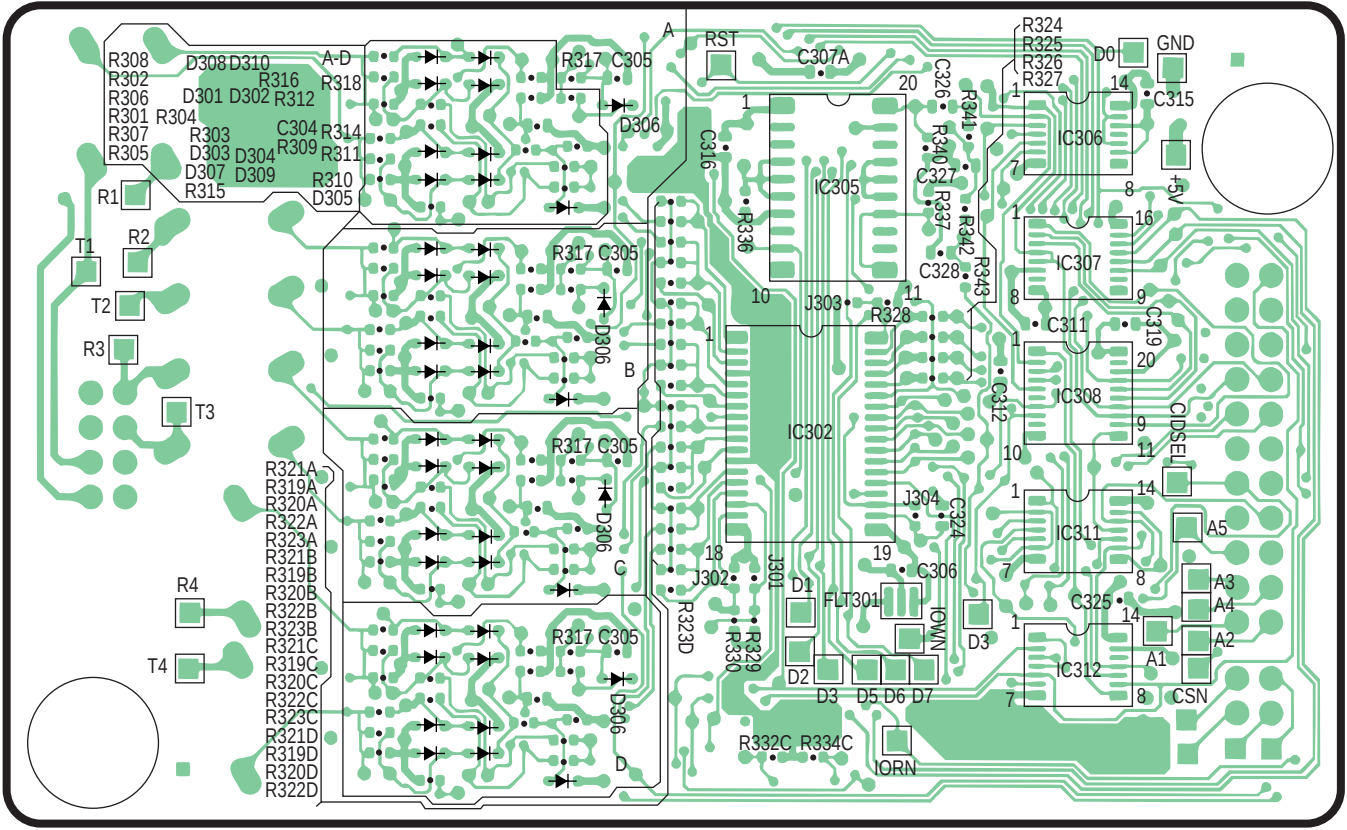
CS2N CS3N

SERIAL-PARALLEL CONVERT IC

IC307 IC308 IC309 IC310 IC311 IC312

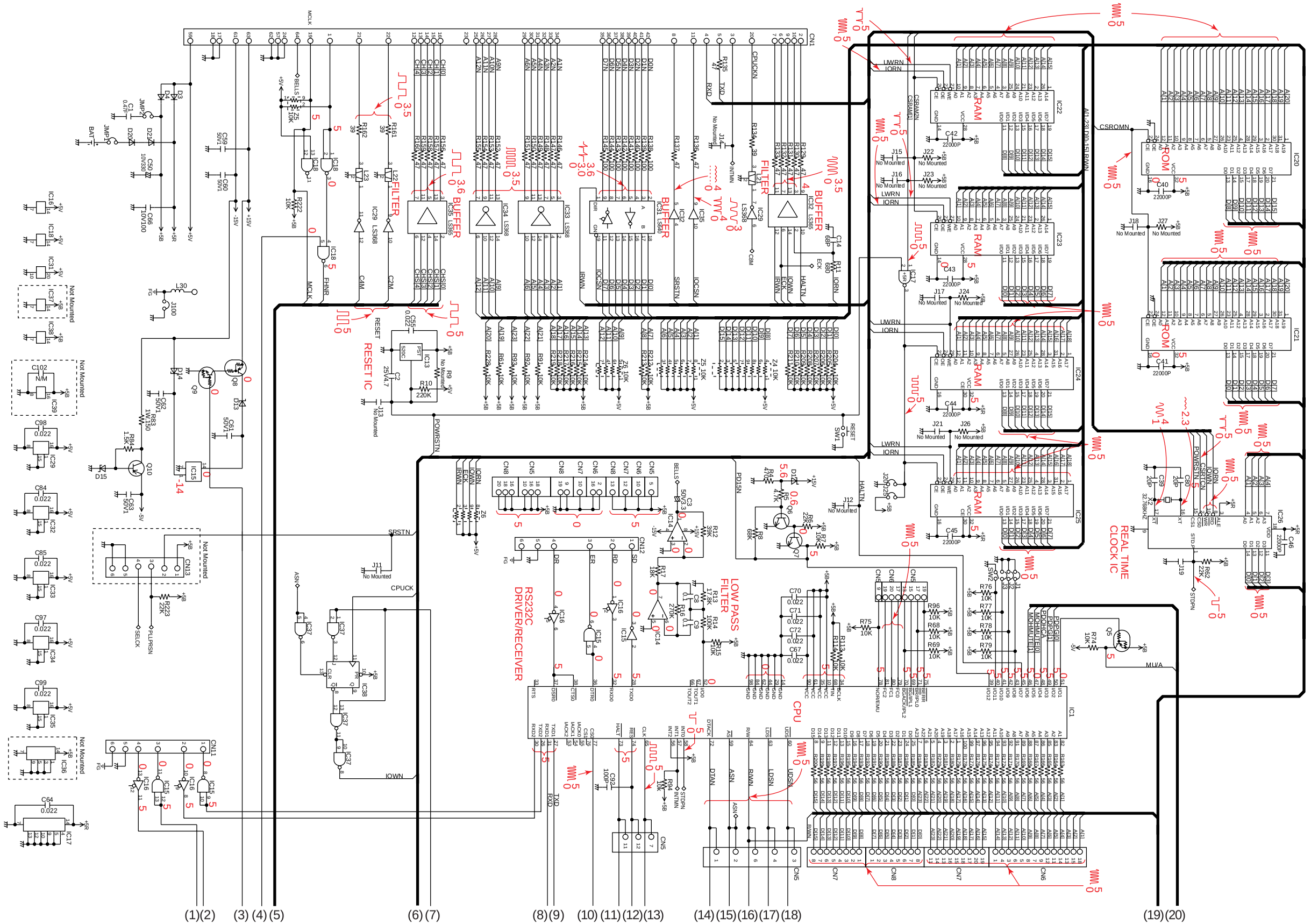
C318 0.022 C319 0.022 C320 0.022 C321 0.022 C322 0.022 C325 0.022


C317
R333A
C318
IC303A
IC304
CN301
R339
C322
C320
IC309
IC310
C321
R335
C308
C309
CN303
X302
R334A
R332A
C307C
R338
IC303C
R333C
R331C
A
B
C
D
IC301
C303
R313
R331A
X301
C302A
C301A
C302B
C301B
C302C
C301C
CN302
C302D
C301D
PSUP1356Z
A


R308
R302
R306
R301
R307
R305
R304
D308 D310
D301 D302
R316
R312
R303
D303 D304
D307 D309
R315
A-D
R318
C304
R309
R314
R311
R310
D305
R1
T1
R2
T2
R3
T3
R317 C305
D306
A
B
C
D
R321A
R319A
R320A
R322A
R323A
R321B
R319B
R320B
R322B
R323B
R321C
R319C
R320C
R322C
R323C
R321D
R319D
R320D
R322D
R4
T4
RST
C307A
IC305
IC302
R336
C316
J303
R328
J304
C324
J302
J301
R323D
R339
R330
D1
FLT301
IOWN
D2
D3
D5 D6 D7
R332C R334C
IORN
C306
D3
20
C326
R341
R340
C327
R337
R342
C328
R343
C312
R324
R325
R326
R327
D0
GND
C315
IC306
+5V
IC307
C311
C319
IC308
C/DSEL
IC311
A5
A3
A4
A2
A1
C325
IC312
CSN

31 SCHEMATIC DIAGRAM (KX-TA1232)

31.1. CPU BOARD



(1)(2) (3) (4)(5) (6)(7) (8)(9) (10)(11)(12)(13) (14)(15)(16)(17)(18) (19)(20)

Not Mounted (Except IC38)

ASIC
CONFERENCE
DTMF GENERATOR
TONE GENERATOR
P. I/O PORTS

CONF & TONE ROM

MUSIC IC

AGC CIRCUIT

AMP

CODEC

SW

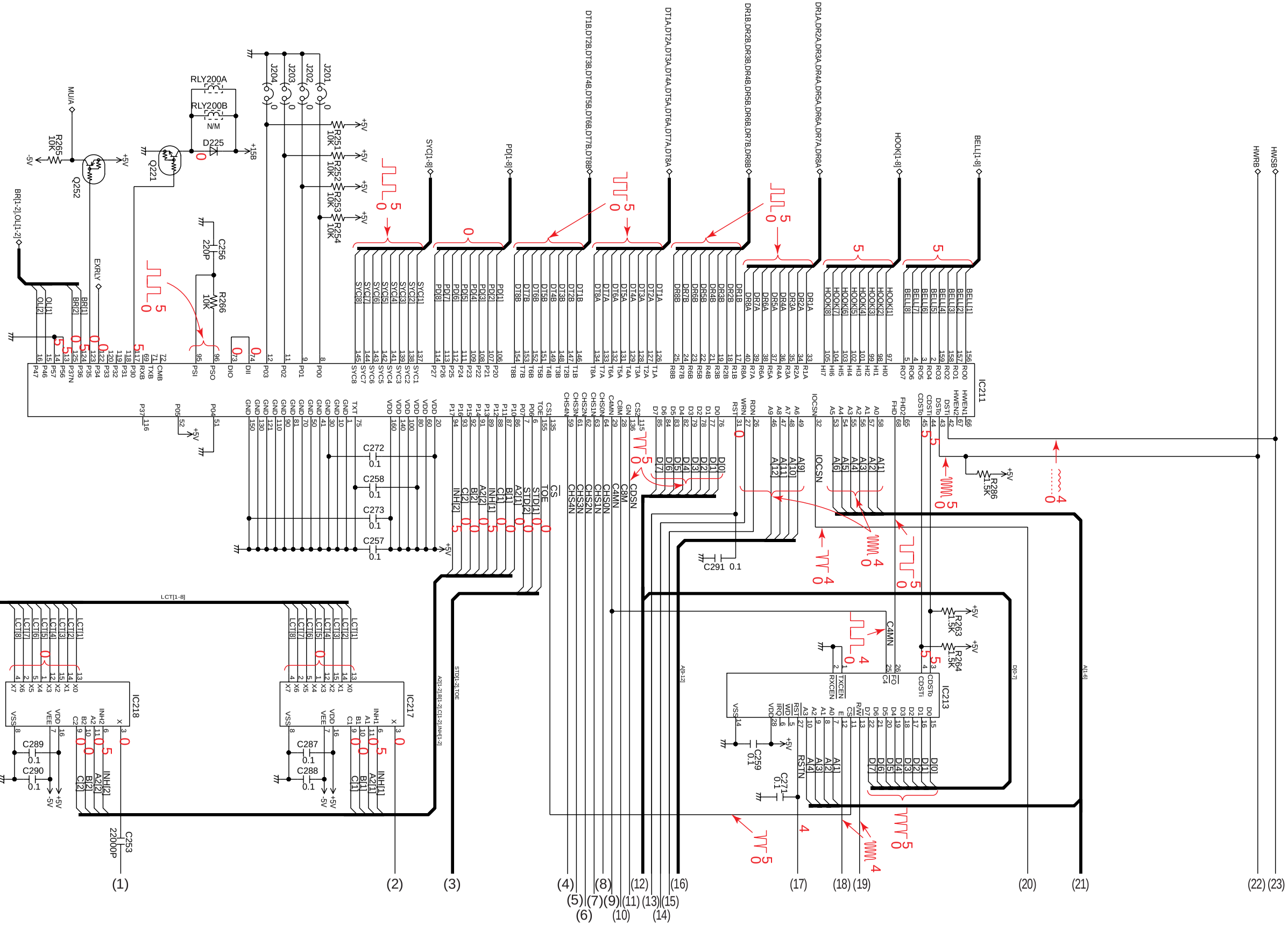
LED

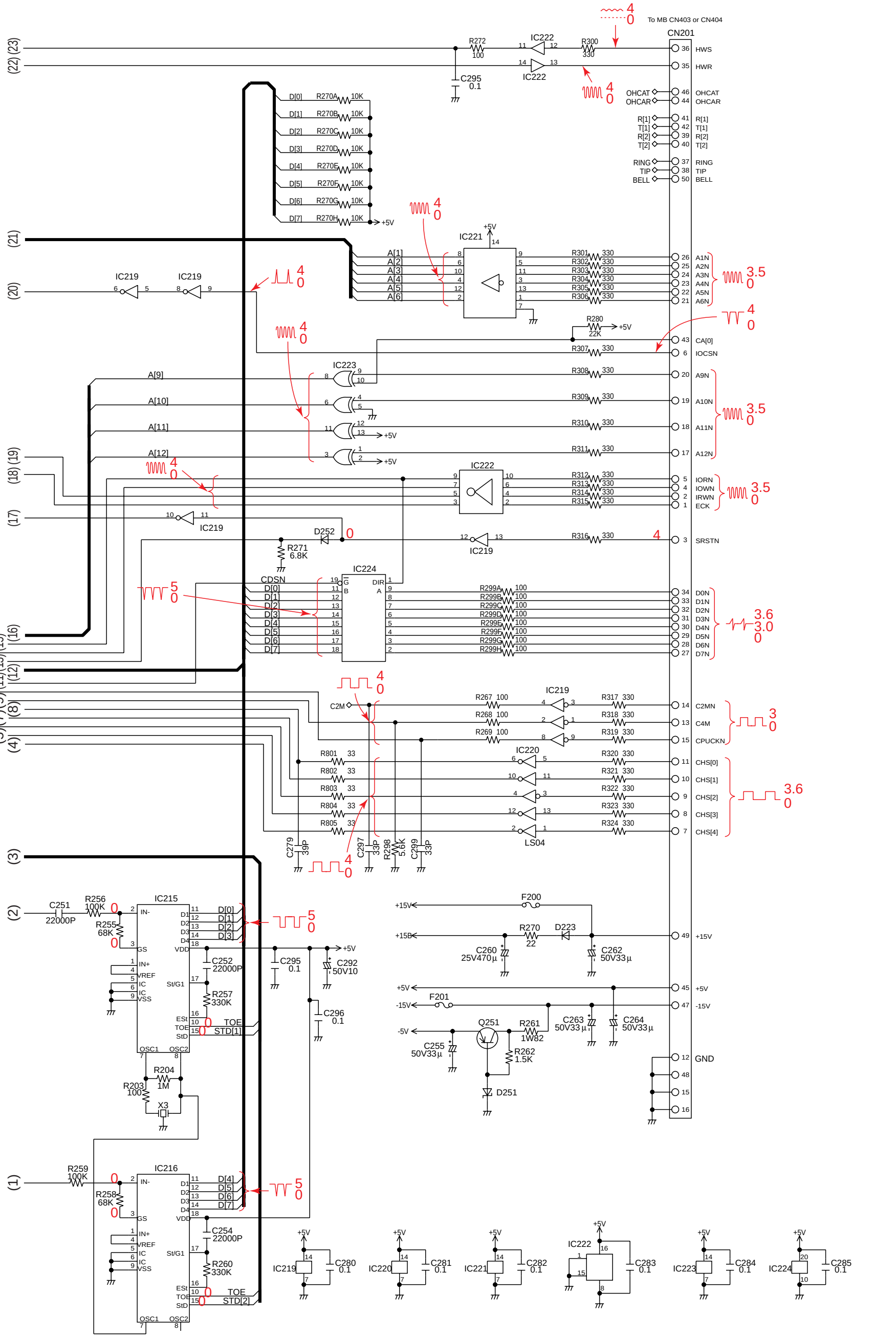
SMDR

Not Mounted

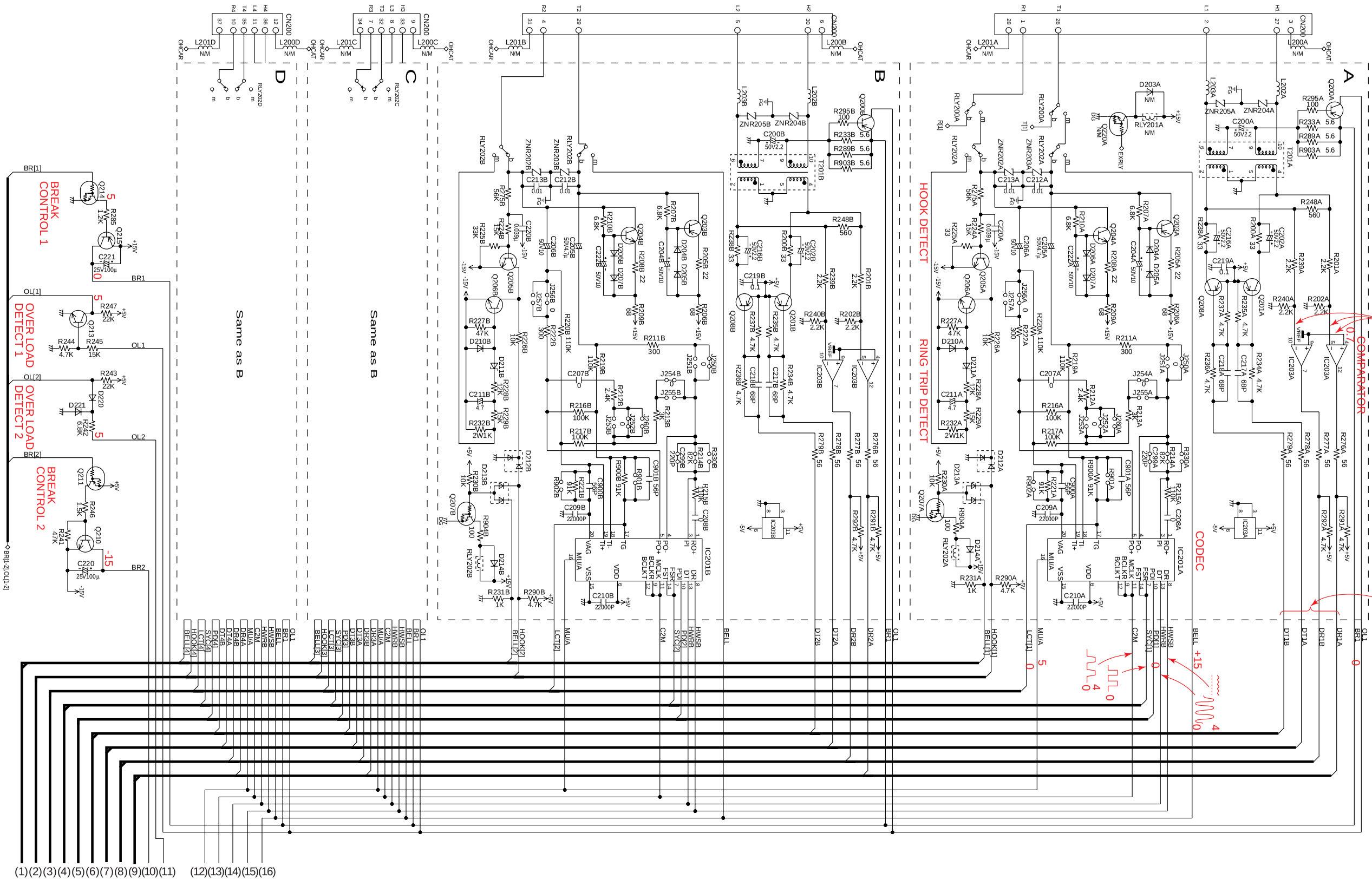
31.2. EXTENSION BOARD

31.2.1. NO.1




To MB CN403 or CN404
CN201
IC222
IC219
IC221
IC220
IC223
IC224
IC215
IC216
R272 100
R300 330
C295 0.1
OHCAT
OHCAR
R[1]
T[1]
R[2]
T[2]
RING
TIP
BELL
HWS
HWR
D[0] R270A 10K
D[1] R270B 10K
D[2] R270C 10K
D[3] R270D 10K
D[4] R270E 10K
D[5] R270F 10K
D[6] R270G 10K
D[7] R270H 10K
+5V
A[1]
A[2]
A[3]
A[4]
A[5]
A[6]
R301 330
R302 330
R303 330
R304 330
R305 330
R306 330
A1N
A2N
A3N
A4N
A5N
A6N
3.5
R280 22K
CA[0]
R307 330
IOCSN
A[9]
A[10]
A[11]
A[12]
R308 330
R309 330
R310 330
R311 330
A9N
A10N
A11N
A12N
R312 330
R313 330
R314 330
R315 330
IORN
IOWN
IRWN
ECK
D252
R271 6.8K
R316 330
SRSTN
CDSN
R299A 100
R299B 100
R299C 100
R299D 100
R299E 100
R299F 100
R299G 100
R299H 100
D0N
D1N
D2N
D3N
D4N
D5N
D6N
D7N
3.6
3.0
C2M
R267 100
R268 100
R269 100
R317 330
R318 330
R319 330
C2MN
C4M
CPUCKN
R801 33
R802 33
R803 33
R804 33
R805 33
R320 330
R321 330
R322 330
R323 330
R324 330
CHS[0]
CHS[1]
CHS[2]
CHS[3]
CHS[4]
LS04
C279 39P
C297 33P
R298 5.6K
C299 33P
C251 22000P
R256 100K
R255 68K
C252 22000P
C295 0.1
C292 50V10
C296 0.1
R257 330K
TOE
STD[1]
R204 1M
R203 100
X3
C254 22000P
R260 330K
STD[2]
R259 100K
R258 68K
F200
R270 22
D223
C260 25V470µ
C262 50V33µ
F201
Q251
R261 1W82
C263 50V33µ
C264 50V33µ
C255 50V33µ
R262 1.5K
D251
GND
C280 0.1
C281 0.1
C282 0.1
C283 0.1
C284 0.1
C285 0.1

31.2.2. NO.2


A
B
C
D
OVER LOAD DETECT
HOOK DETECT
RING TRIP DETECT
COMPARATOR
CODEC
BREAK CONTROL 1
BREAK CONTROL 2
OVER LOAD DETECT 1
OVER LOAD DETECT 2
Same as B
Same as B
IC201A
IC201B
(1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11)
(12)(13)(14)(15)(16)

E

F

Same as E

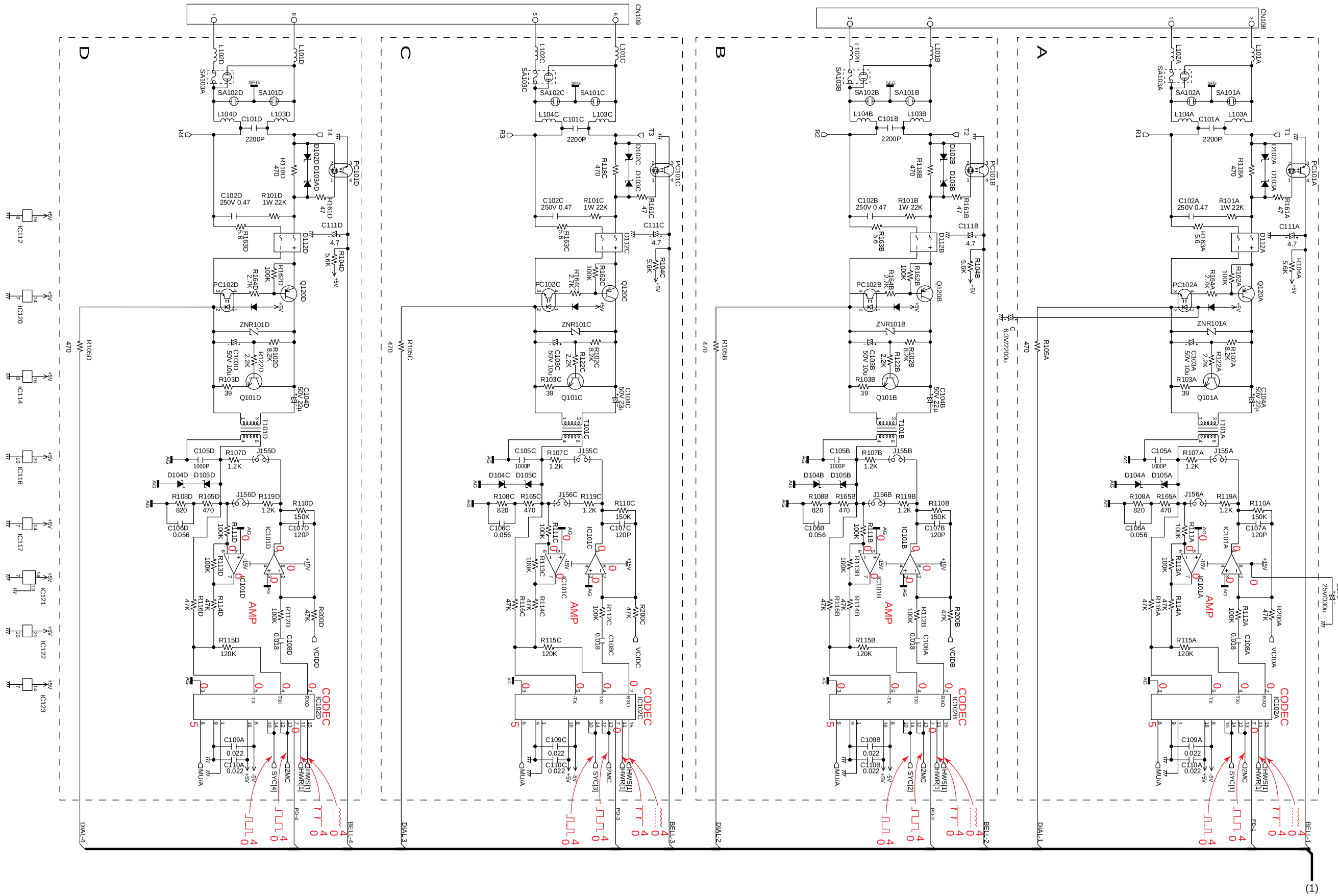
G

Same as E

H

Same as E

31.3. CO BOARD


CN109
CN108
D
C
B
A
SA103D
SA103C
SA103B
SA103A
SA102D
SA101D
SA102C
SA101C
SA102B
SA101B
SA102A
SA101A
L102D
L101D
L104D
C101D
L103D
2200P
T4
R4
T3
R3
T2
R2
T1
R1
PC101D
PC101C
PC101B
PC101A
D102D
D103AD
R118D
470
R161D
47
C102D
250V 0.47
R101D
1W 22K
R163D
5.6
C111D
4.7
D112D
R104D
5.6K
+5V
PC102D
R164D
2.7K
R162D
100K
Q120D
ZNR101D
C103D
50V 10u
R102D
8.2K
R122D
2.2K
R103D
39
Q101D
C104D
50V 22u
T101D
R105D
470
C105D
1000P
R107D
1.2K
J155D
D104D
D105D
R108D
820
R165D
470
J156D
R119D
1.2K
R110D
150K
C106D
0.056
R111D
100K
IC101D
R113D
100K
-15V
+15V
AMP
R114D
47K
R116D
47K
R112D
100K
C108D
0.018
R200D
47K
VCIDD
R115D
120K
CODEC
IC102D
TX
TXI
RXO
C109A
0.022
C110A
0.022
MUA
SYC[4]
2MC
HWS[1]
HWR[1]
PD-4
DIAL-4
BELL-4
IC112
IC120
IC114
IC116
IC117
IC121
IC122
IC123
D102C
D103C
R118C
R161C
C102C
R101C
R163C
C111C
D112C
R104C
PC102C
R164C
R162C
Q120C
ZNR101C
C103C
R102C
R122C
R103C
Q101C
C104C
T101C
R105C
C105C
R107C
J155C
D104C
D105C
R108C
R165C
J156C
R119C
R110C
C106C
R111C
IC101C
R113C
R114C
R116C
R112C
C108C
R200C
R115C
VCIDC
C109C
C110C
SYC[3]
DIAL-3
BELL-3
D102B
D103B
R118B
R161B
C102B
R101B
R163B
C111B
D112B
R104B
PC102B
R164B
R162B
Q120B
ZNR101B
C103B
R102B
R122B
R103B
Q101B
C104B
T101B
R105B
C105B
R107B
J155B
D104B
D105B
R108B
R165B
J156B
R119B
R110B
C106B
R111B
IC101B
R113B
R114B
R116B
R112B
C108A
R200B
R115B
VCIDB
C109B
C110B
SYC[2]
DIAL-2
BELL-2
D102A
D103A
R118A
R161A
C102A
R101A
R163A
C111A
D112A
R104A
PC102A
R164A
R162A
Q120A
ZNR101A
C103A
R102A
R122A
R103A
Q101A
C104A
T101A
R105A
C105A
R107A
J155A
D104A
D105A
R108A
R165A
J156A
R119A
R110A
C106A
R111A
IC101A
R113A
R114A
R116A
R112A
R200A
R115A
VCIDA
C109A
C110A
SYC[1]
DIAL-1
BELL-1
C
6.3V/2200u
C170
25V/330u
(1)

(1)

BELL[1-4],DIAL[1-4],PD[1-4]

E
CN110
T5
R5
HWS[1]
HWR[1]
2MC
SYC[5]
MU/A

F
CN110
T6
R6
HWS[1]
HWR[1]
2MC
SYC[6]
MU/A

G
CN111
T7
R7
HWS[1]
HWR[1]
2MC
SYC[7]
MU/A

H
CN111
T8
R8
HWS[1]
HWR[1]
2MC
SYC[8]
MU/A

SFG
SA104
FG

IC111
DIAL-1 DIAL-2 DIAL-3 DIAL-4 DIAL-5 DIAL-6
PD-1 PD-2 PD-3 PD-4 PD-5 PD-6
Bell-1 BELL-2 BELL-3 BELL-4 BELL-5 BELL-6
DIAL-7 DIAL-8 PD-7 PD-8 BELL-7 BELL-8
D[0] D[1] D[2] D[3] D[4] D[5] D[6] D[7]
RD WR CS RST VSS VDD
A0 A1 A2 A3
C155 22000P

CN106 CN104
D0 D1 D2 D3 D4 D5 D6 D7

IC116
D[0-7]
D0N D1N D2N D3N D4N D5N D6N D7N

CN101
HWS[1] HWR[1] TIP RING
D0N D1N D2N D3N D4N D5N D6N D7N
R125 100 R126 100 R127 100 R128 100 R129 100 R130 100 R131 100 R132 100

IC117 +5V
IC123
A[1-4]
A1N A2N A3N A4N A6N A9N A10N A11N A12N IOCSN
IC114
IC121
IC122
IC120
IC112
SYC[1] SYC[2] SYC[3] SYC[4] SYC[5] SYC[6] SYC[7] SYC[8]
CHS[2] CHS[3] CHS[4] CHS[0] CHS[1]
2MC C2MN SRSIN A5N GND
R161
C120
C151 C152 C153 50V33

IORN IOWN A1 A2 A3 A4

J151 J152 J153 J154
R155 10K R156 10K R157 10K R158 10K
Q112
R159 10K
R160 10K
C154 50V1
R153 1.5K
D154
Q111
R154 1W220
+15V -15V +5V -5V

(TO KX-TA123293)

CN107
T5 R5 T6 R6 T7 R7 T8 R8

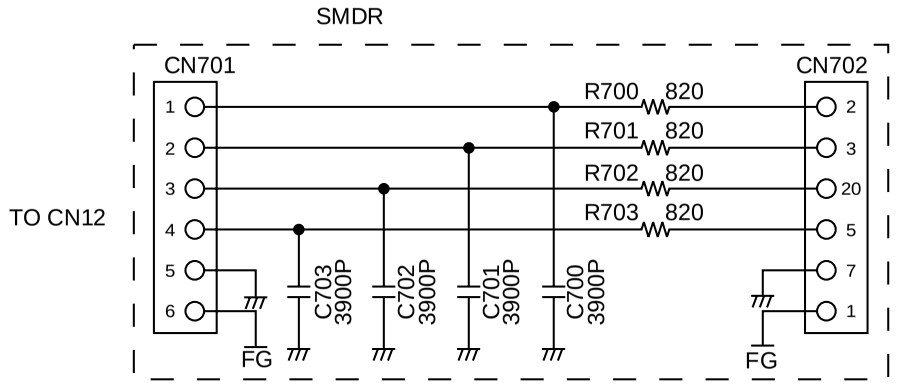
CN105
T1 R1 T2 R2 T3 R3 T4 R4

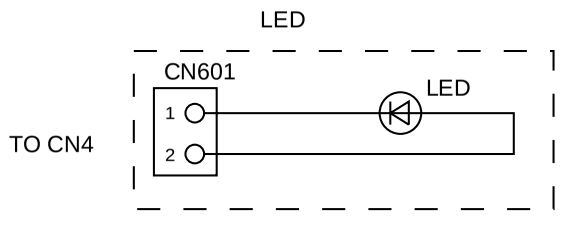
CN113
VCIDE VCIDF VCIDG VCIDH

CN112
VCIDA VCIDB VCIDC VCIDD

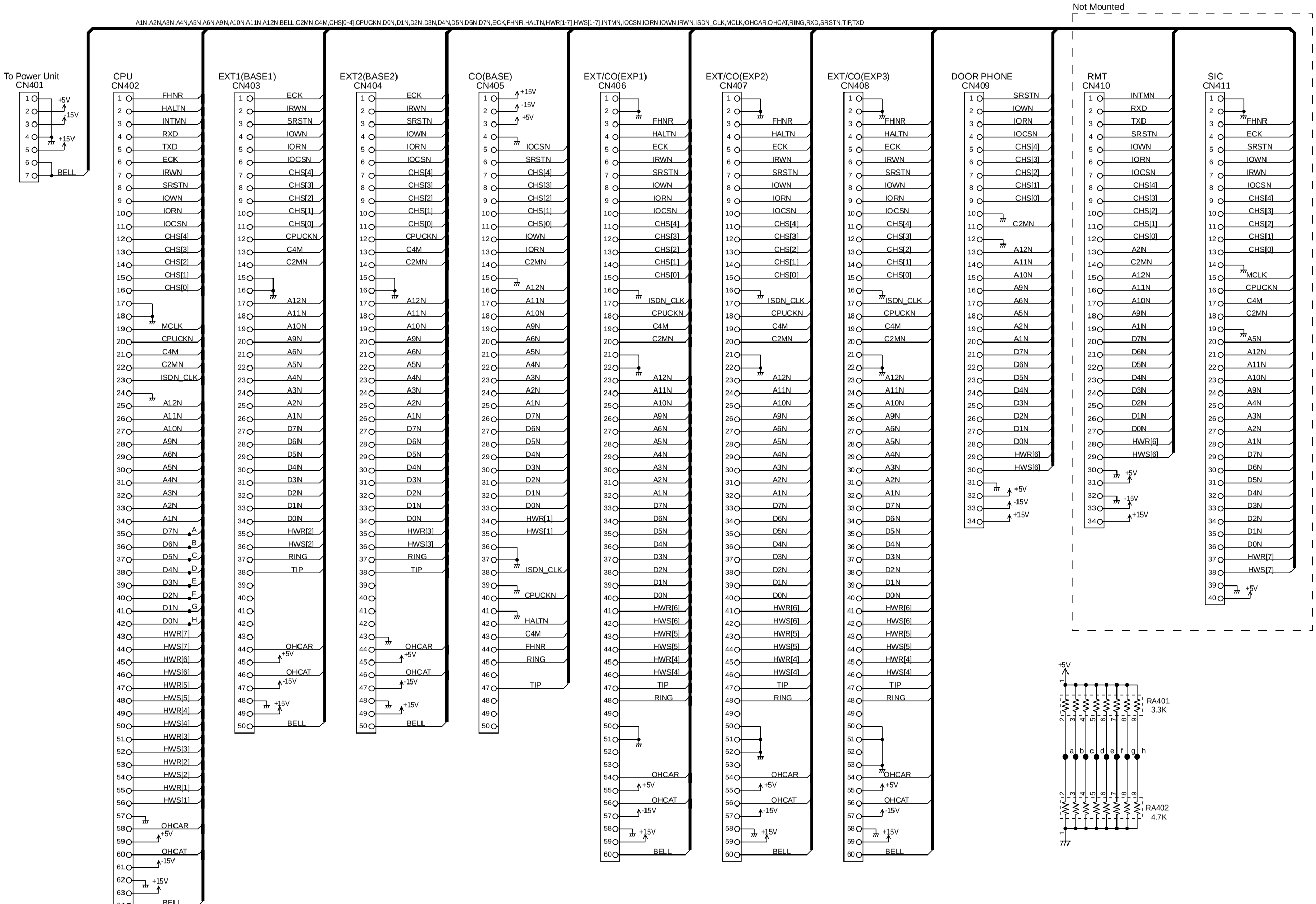
CN106 +5V
CN104 +5V

31.4. SMDR/LED BOARD

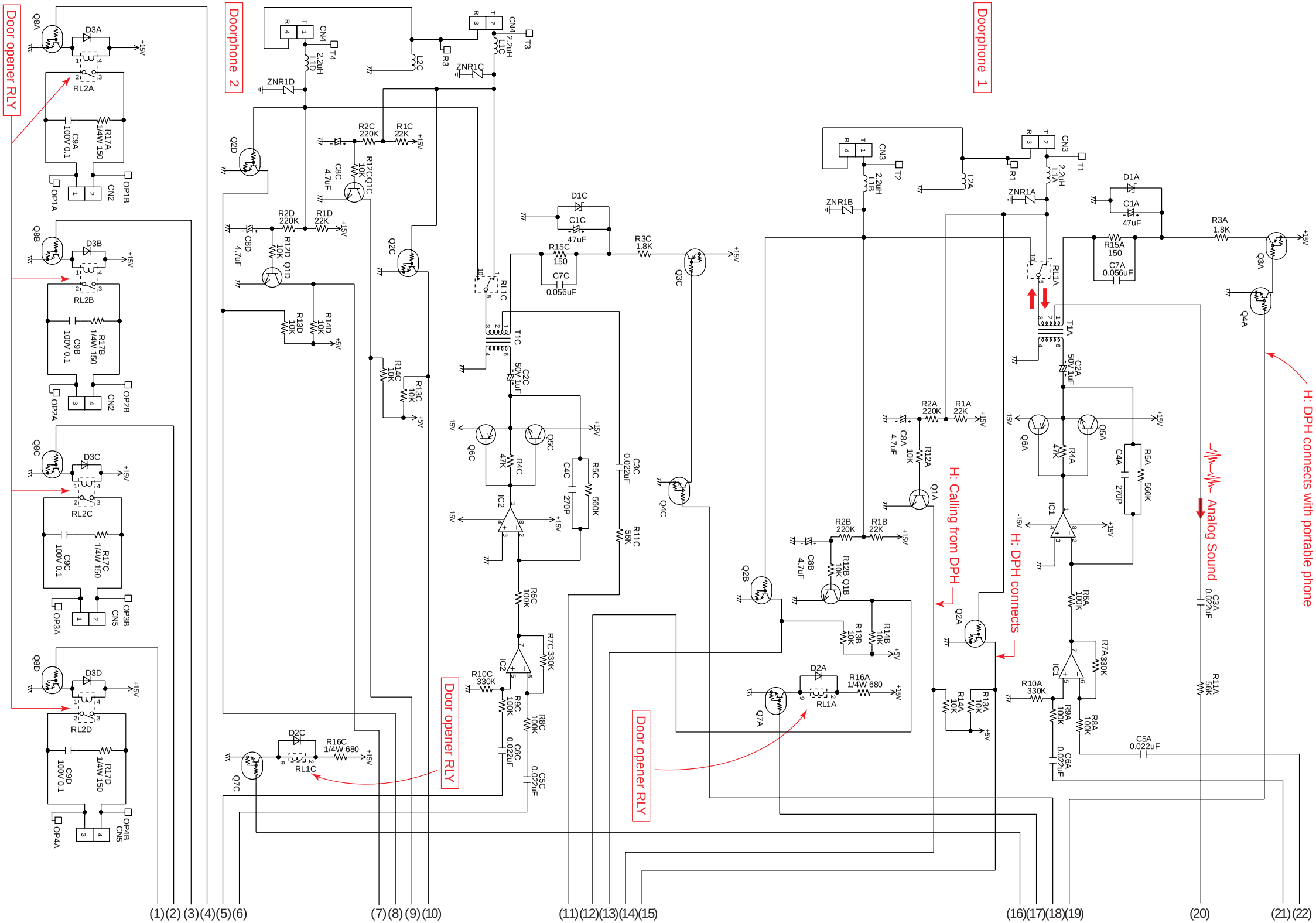


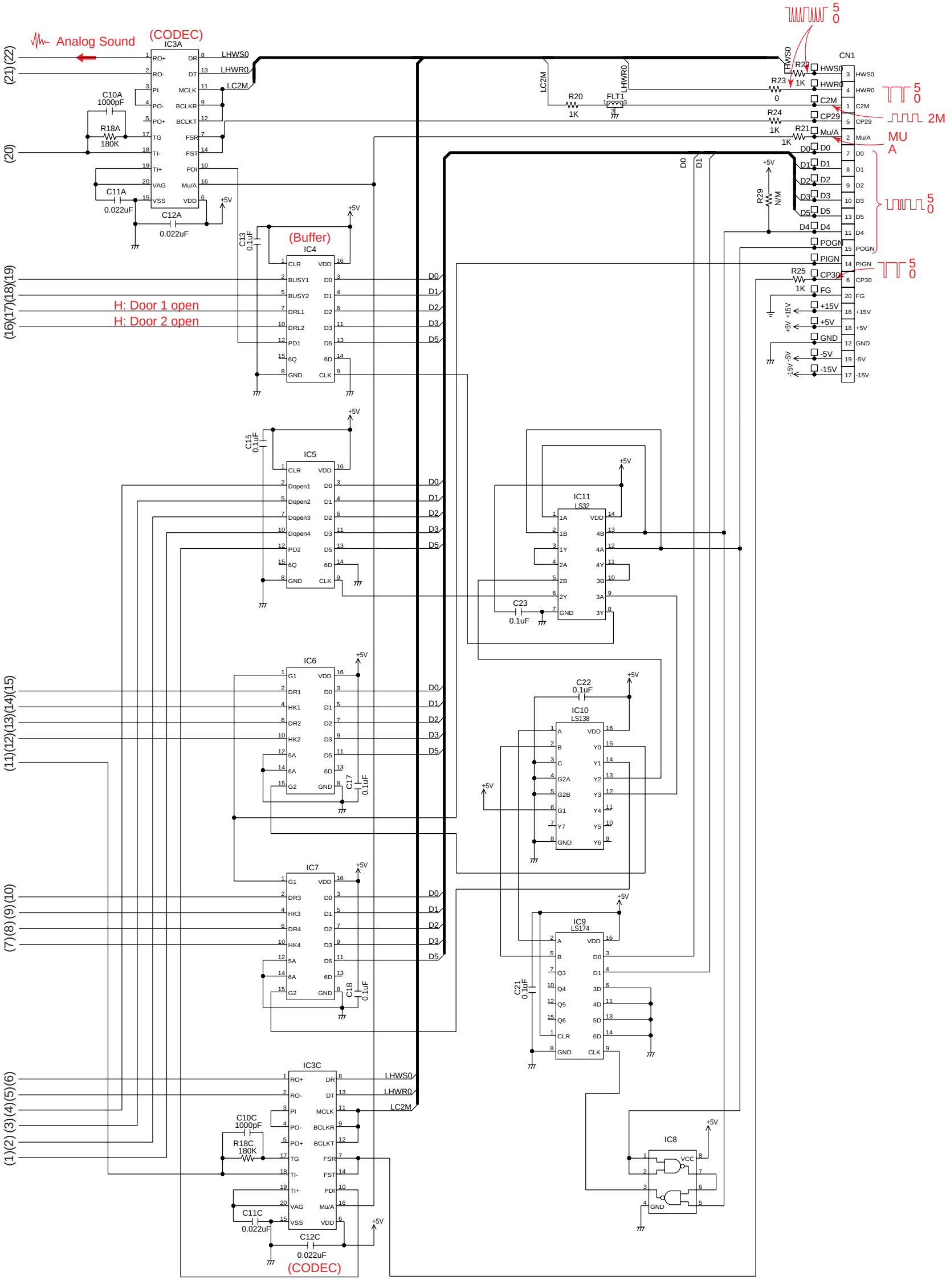


31.5. MOTHER BOARD



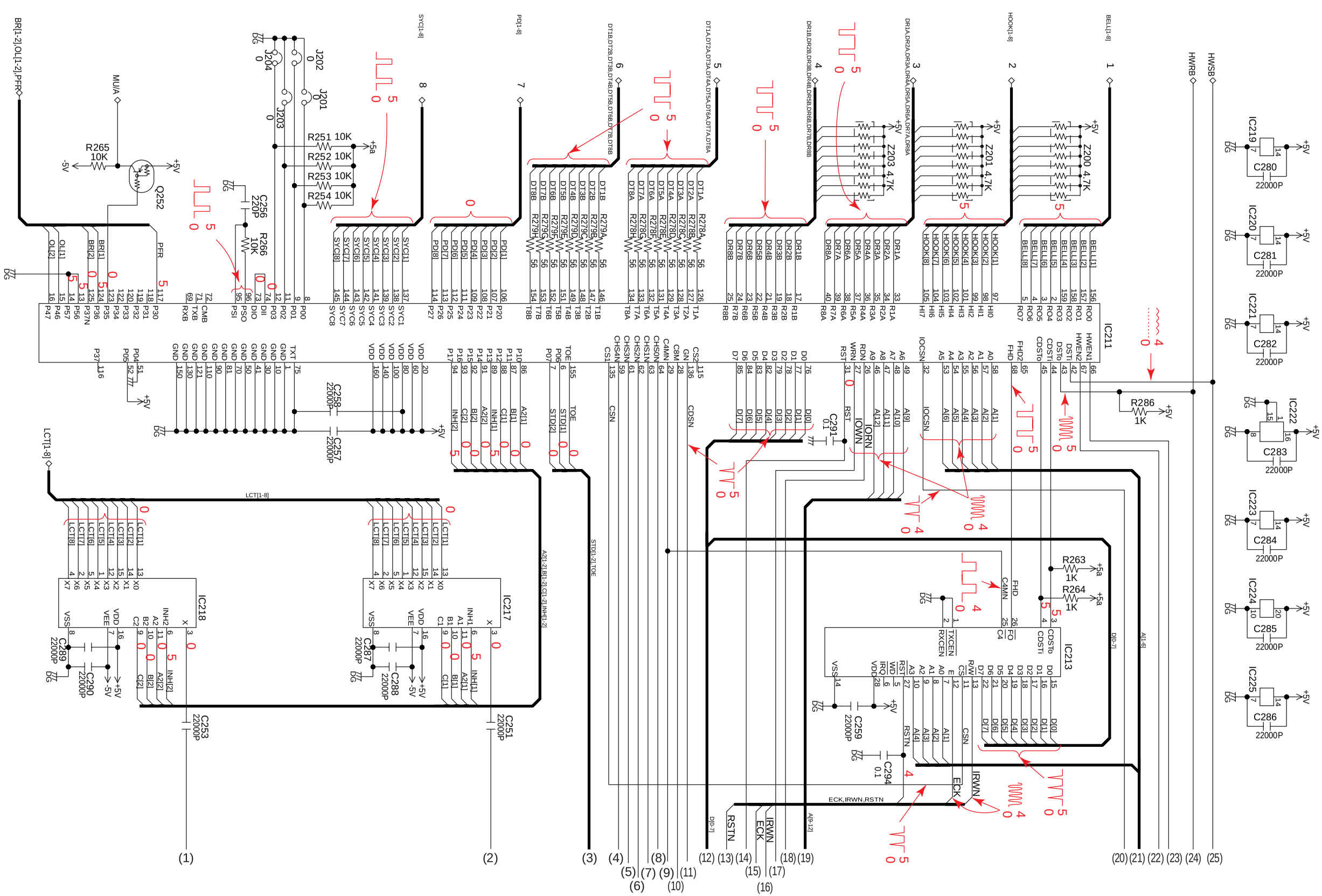
33 SCHEMATIC DIAGRAM (KX-TA123260)

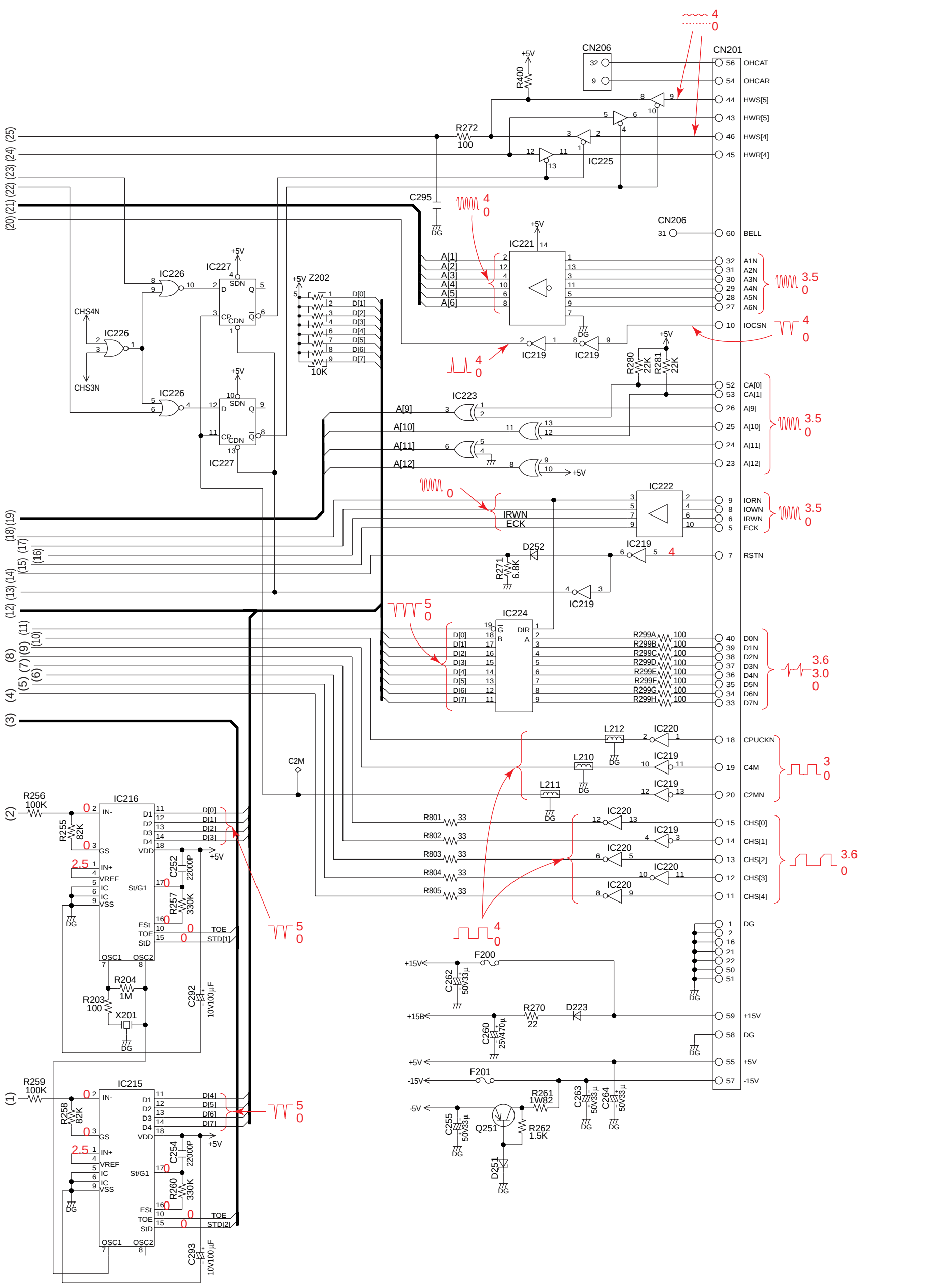



Analog Sound
(CODEC)
IC3A
RO+
RO-
PI
PO-
PO+
TG
TI-
TI+
VAG
VSS
DR
DT
MCLK
BCLKR
BCLKT
FSR
FST
PDI
Mu/A
VDD
LHWS0
LHWR0
LC2M
C10A
1000pF
R18A
180K
C11A
0.022uF
C12A
0.022uF
(21)(22)
(20)
(16)(17)(18)(19)
H: Door 1 open
H: Door 2 open
(Buffer)
IC4
CLR
BUSY1
BUSY2
DRL1
DRL2
PD1
6Q
GND
VDD
D0
D1
D2
D3
D5
CLK
C13
0.1uF
+5V
IC5
Dopen1
Dopen2
Dopen3
Dopen4
PD2
C15
0.1uF
IC6
G1
DR1
HK1
DR2
HK2
5A
6A
G2
DR3
HK3
DR4
HK4
C17
0.1uF
IC7
C18
0.1uF
(11)(12)(13)(14)(15)
(7)(8)(9)(10)
IC3C
C10C
1000pF
R18C
180K
C11C
0.022uF
C12C
0.022uF
(CODEC)
(1)(2)(3)(4)(5)(6)
LHWS0
LHWR0
LC2M
R20
1K
FLT1
R22
1K
R23
0
R24
1K
R21
1K
CN1
HWS0
HWR0
C2M
CP29
Mu/A
D0
D1
D2
D3
D5
D4
POGN
PIGN
CP30
FG
+15V
+5V
GND
-5V
-15V
R29
N/M
R25
1K
5
0
2M
MU
A
IC11
LS32
1A
1B
1Y
2A
2B
2Y
GND
VDD
4B
4A
4Y
3B
3A
3Y
C23
0.1uF
IC10
LS138
A
B
C
G2A
G2B
G1
Y7
GND
VDD
Y0
Y1
Y2
Y3
Y4
Y5
Y6
C22
0.1uF
IC9
LS174
CLR
GND
VDD
D0
D1
Q3
Q4
Q5
Q6
3D
4D
5D
6D
CLK
C21
0.1uF
IC8
VCC
GND

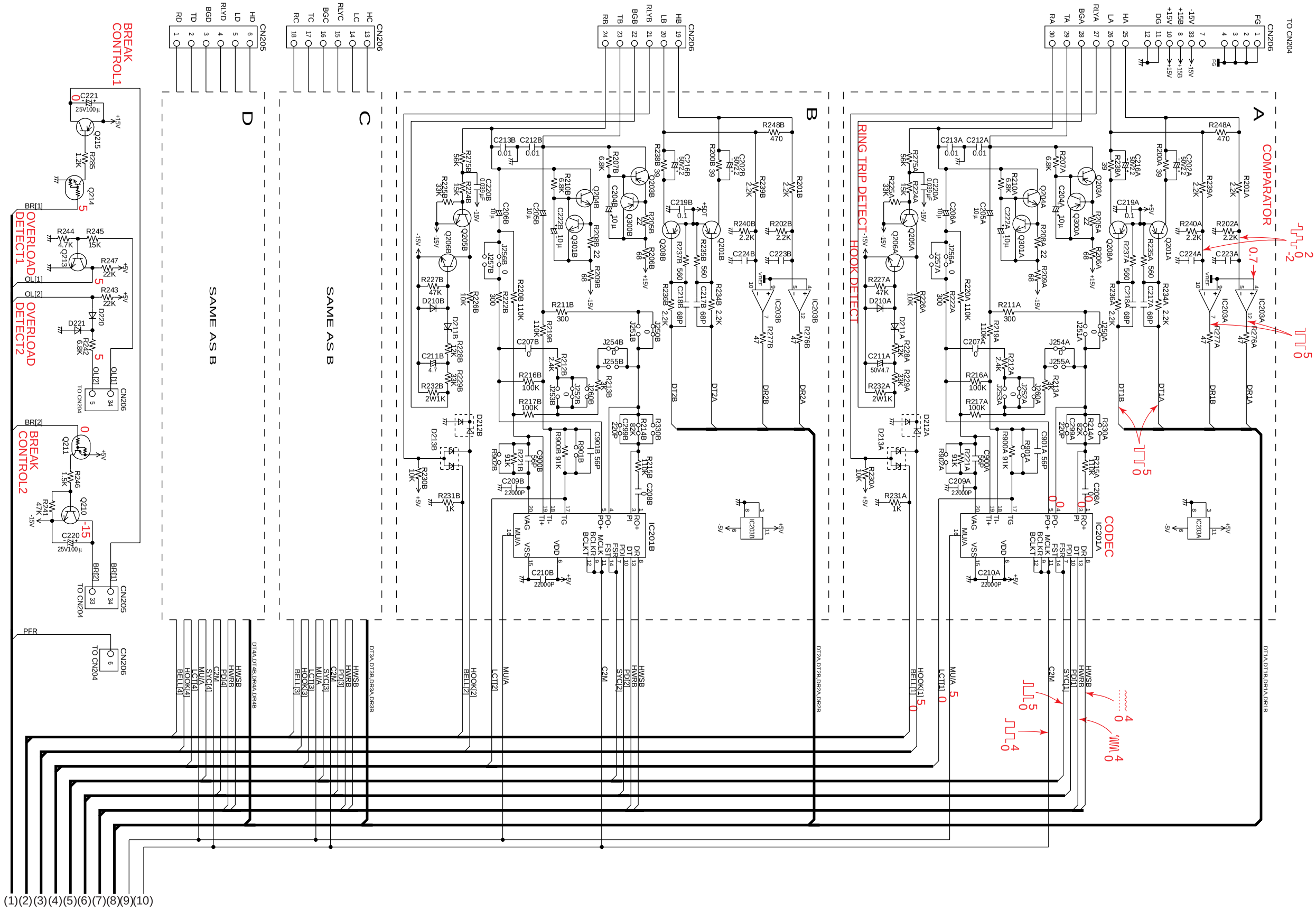
35 SCHEMATIC DIAGRAM (KX-TA123270)

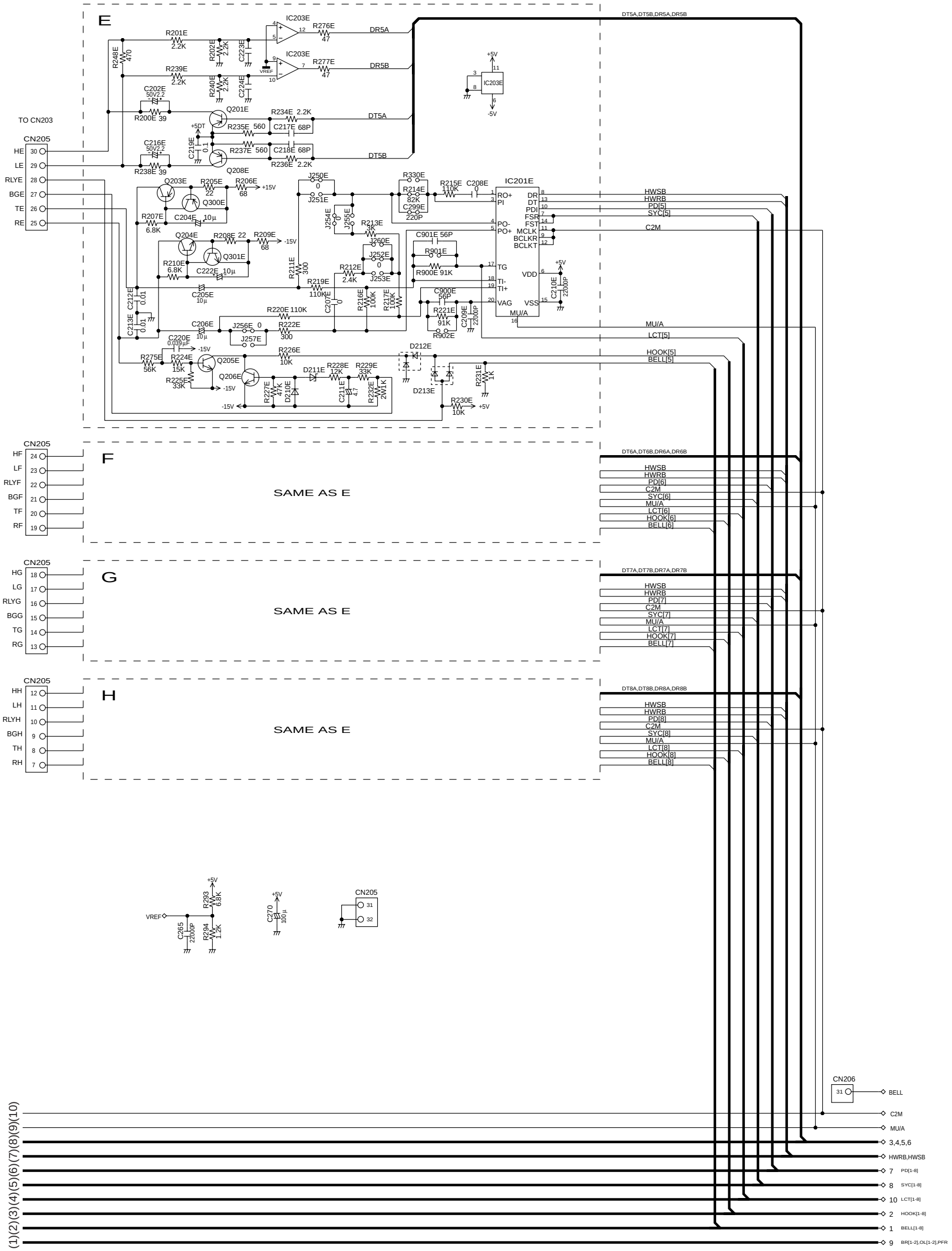
35.1. NO.1

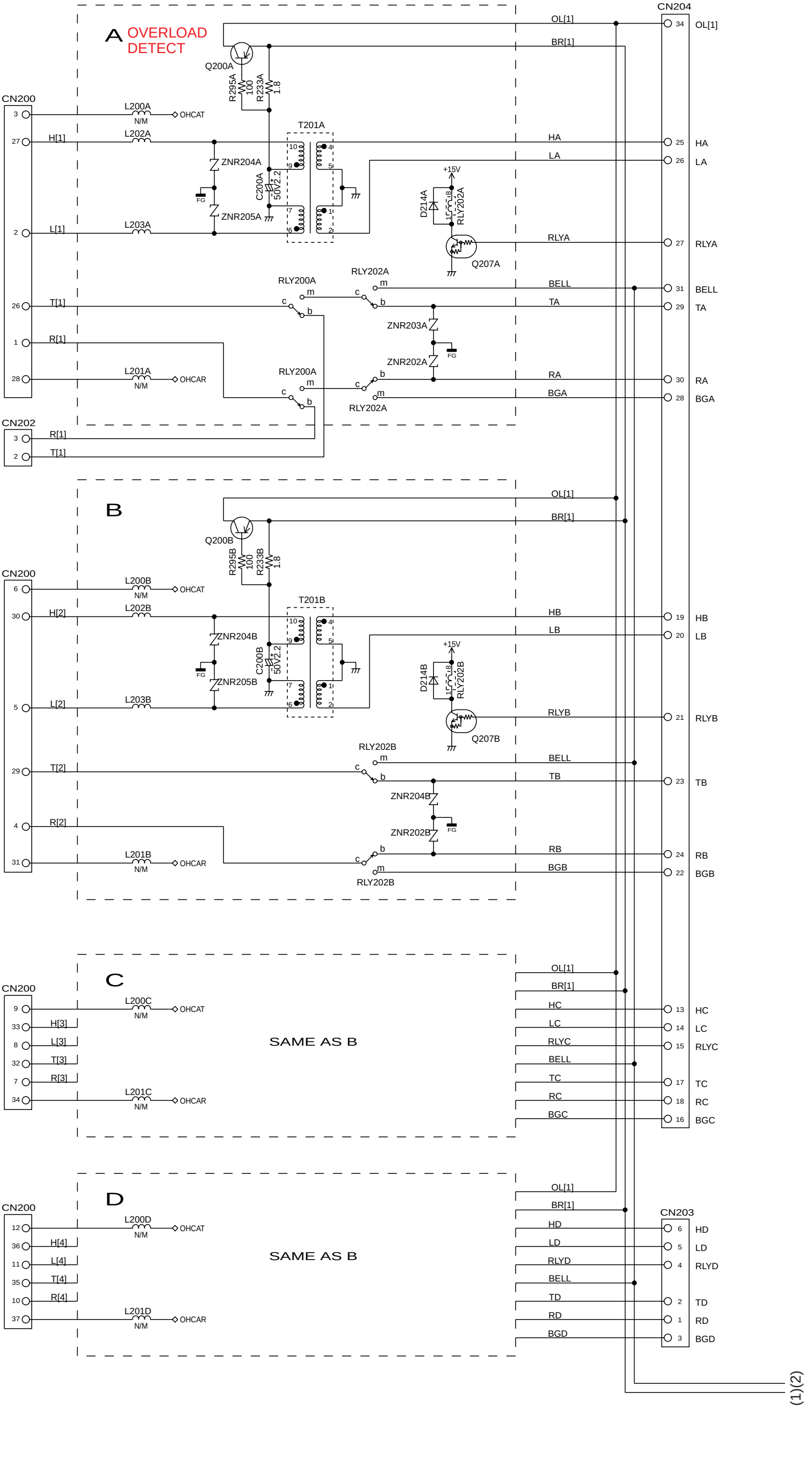



CN201
CN206
OHCAT
OHCAR
HWS[5]
HWR[5]
HWS[4]
HWR[4]
BELL
A1N
A2N
A3N
A4N
A5N
A6N
IOCSN
CA[0]
CA[1]
A[9]
A[10]
A[11]
A[12]
IORN
IOWN
IRWN
ECK
RSTN
D0N
D1N
D2N
D3N
D4N
D5N
D6N
D7N
CPUCKN
C4M
C2MN
CHS[0]
CHS[1]
CHS[2]
CHS[3]
CHS[4]
DG
+15V
+5V
-15V
R272
100
R400
C295
IC225
IC221
IC219
IC223
IC222
IC224
IC220
L212
L210
L211
C2M
D252
R271
6.8K
R280
22K
R281
22K
R299A
R299B
R299C
R299D
R299E
R299F
R299G
R299H
R801
R802
R803
R804
R805
IC226
IC227
CHS4N
CHS3N
Z202
10K
R204
1M
R203
100
X201
C292
10V100µF
IC216
R256
100K
R255
82K
C252
22000P
R257
330K
TOE
STD[1]
IC215
R259
100K
R258
82K
C254
22000P
R260
330K
STD[2]
C293
10V100µF
F200
C262
50V33µ
R270
22
D223
C260
25V470µ
F201
R261
1W82
C263
50V33µ
C264
50V33µ
C255
50V33µ
Q251
R262
1.5K
D251

35.2. NO.2


A
B
C
D
COMPARATOR
RING TRIP DETECT
HOOK DETECT
CODEC
IC201A
IC201B
SAME AS B
SAME AS B
BREAK CONTROL1
BREAK CONTROL2
OVERLOAD DETECT1
OVERLOAD DETECT2
TO CN204
CN205
CN206
CN203
PFR
DT1A,DT1B,DR1A,DR1B
DT2A,DT2B,DR2A,DR2B
DT3A,DT3B,DR3A,DR3B
DT4A,DT4B,DR4A,DR4B
HWSB
HWRB
PDI[4]
C2M
SYCI[4]
MU/A
LCT[4]
HOOK[4]
BELL[4]
PDI[3]
SYCI[3]
LCT[3]
HOOK[3]
BELL[3]
PDI[2]
SYCI[2]
HOOK[2]
BELL[2]
PDI[1]
SYCI[1]
HOOK[1]
BELL[1]
(1)(2)(3)(4)(5)(6)(7)(8)(9)(10)


E
F
G
H
SAME AS E
SAME AS E
SAME AS E
TO CN203
CN205
HE
LE
RLYE
BGE
TE
RE
HF
LF
RLYF
BGF
TF
RF
HG
LG
RLYG
BGG
TG
RG
HH
LH
RLYH
BGH
TH
RH
IC203E
IC201E
Q201E
Q208E
Q203E
Q300E
Q204E
Q301E
Q205E
Q206E
D212E
D213E
D211E
VREF
DR5A
DR5B
DT5A
DT5B
DT5A,DT5B,DR5A,DR5B
DT6A,DT6B,DR6A,DR6B
DT7A,DT7B,DR7A,DR7B
DT8A,DT8B,DR8A,DR8B
HWSB
HWRB
PD[5]
SYC[5]
C2M
MU/A
LCT[5]
HOOK[5]
BELL[5]
PD[6]
SYC[6]
LCT[6]
HOOK[6]
BELL[6]
PD[7]
SYC[7]
LCT[7]
HOOK[7]
BELL[7]
PD[8]
SYC[8]
LCT[8]
HOOK[8]
BELL[8]
CN206
BELL
3,4,5,6
HWRB,HWSB
PD[1-8]
SYC[1-8]
LCT[1-8]
HOOK[1-8]
BELL[1-8]
BR[1-2],OL[1-2],PFR
(1)(2)(3)(4)(5)(6)(7)(8)(9)(10)


A OVERLOAD DETECT
B
C
D
SAME AS B
SAME AS B
CN200
CN202
CN204
CN203
Q200A
Q200B
R295A 100
R233A 1.8
R295B 100
R233B 1.8
T201A
T201B
ZNR204A
ZNR205A
ZNR204B
ZNR205B
C200A 50V2.2
C200B 50V2.2
ZNR203A
ZNR202A
ZNR202B
D214A
D214B
RLY202A
RLY202B
RLY200A
Q207A
Q207B
+15V
FG
L200A N/M
L202A
L203A
L201A N/M
L200B N/M
L202B
L203B
L201B N/M
L200C N/M
L201C N/M
L200D N/M
L201D N/M
OHCAT
OHCAR
3 H[1]
27 L[1]
26 T[1]
1 R[1]
28
2 T[2]
29 R[2]
31
6 H[2]
30 L[2]
5 H[3]
33 L[3]
8 T[3]
32 R[3]
7
9 H[4]
36 L[4]
11 T[4]
35 R[4]
10
12
37
3 R[1]
2 T[1]
OL[1]
BR[1]
HA
LA
RLYA
BELL
TA
RA
BGA
HB
LB
RLYB
TB
RB
BGB
HC
LC
RLYC
TC
RC
BGC
HD
LD
RLYD
TD
RD
BGD
25 HA
26 LA
27 RLYA
31 BELL
29 TA
30 RA
28 BGA
19 HB
20 LB
21 RLYB
23 TB
24 RB
22 BGB
13 HC
14 LC
15 RLYC
17 TC
18 RC
16 BGC
6 HD
5 LD
4 RLYD
2 TD
1 RD
3 BGD
(1)(2)

(TO CN206)

CN204
FG 1 2 3 4
OL[2] 5
32 OHCAT
9 OHCAR
33 -15V
8 +15B
10 +15V
GND 11 12
PFR 6
NC 7

+15B
D225
RLY200B 1C 1A 18 N/M
RLY200A 1C 1A 18
0
5
Q

E

CN200
15 L200E N/M OHCAT
39 H[5] L202E
14 L[5] L203E
35 T[5]
13 R[5]
40 L201E N/M OHCAR

T201E
ZNR204E
ZNR205E
C200E 50V2.2
FG

+15V
D214E
RLY202E 1C 1A 18
Q207E

RLY202E
m c b
ZNR203E
ZNR202E
FG
RLY202E
b c m

R233E 1.8
R295E 100
Q200E

CN203
31 32 GND
HE 30 HE
LE 29 LE
RLYE 28 RLYE
BELL
TE 26 TE
RE 25 RE
BGE 27 BGE
BR[2] 33 BR[2]
OL[2] 34 BR[1]

(TO CN205)

F

CN200
18 L200F N/M OHCAT
42 H[6]
17 L[6]
41 T[6]
16 R[6]
43 L201F N/M OHCAR

SAME AS E

HF 24 HF
LF 23 LF
RLYF 22 RLYF
BELL
TF 20 TF
RF 19 RF
BGF 21 BGF
BR[2]
OL[2]

G

CN200
21 L200G N/M OHCAT
45 H[7]
20 L[7]
44 T[7]
19 R[7]
46 L201G N/M OHCAR

SAME AS E

HG 18 HG
LG 17 LG
RLYG 16 RLYG
BELL
TG 14 TG
RG 13 RG
BGG 15 BGG
BR[2]
OL[2]

H

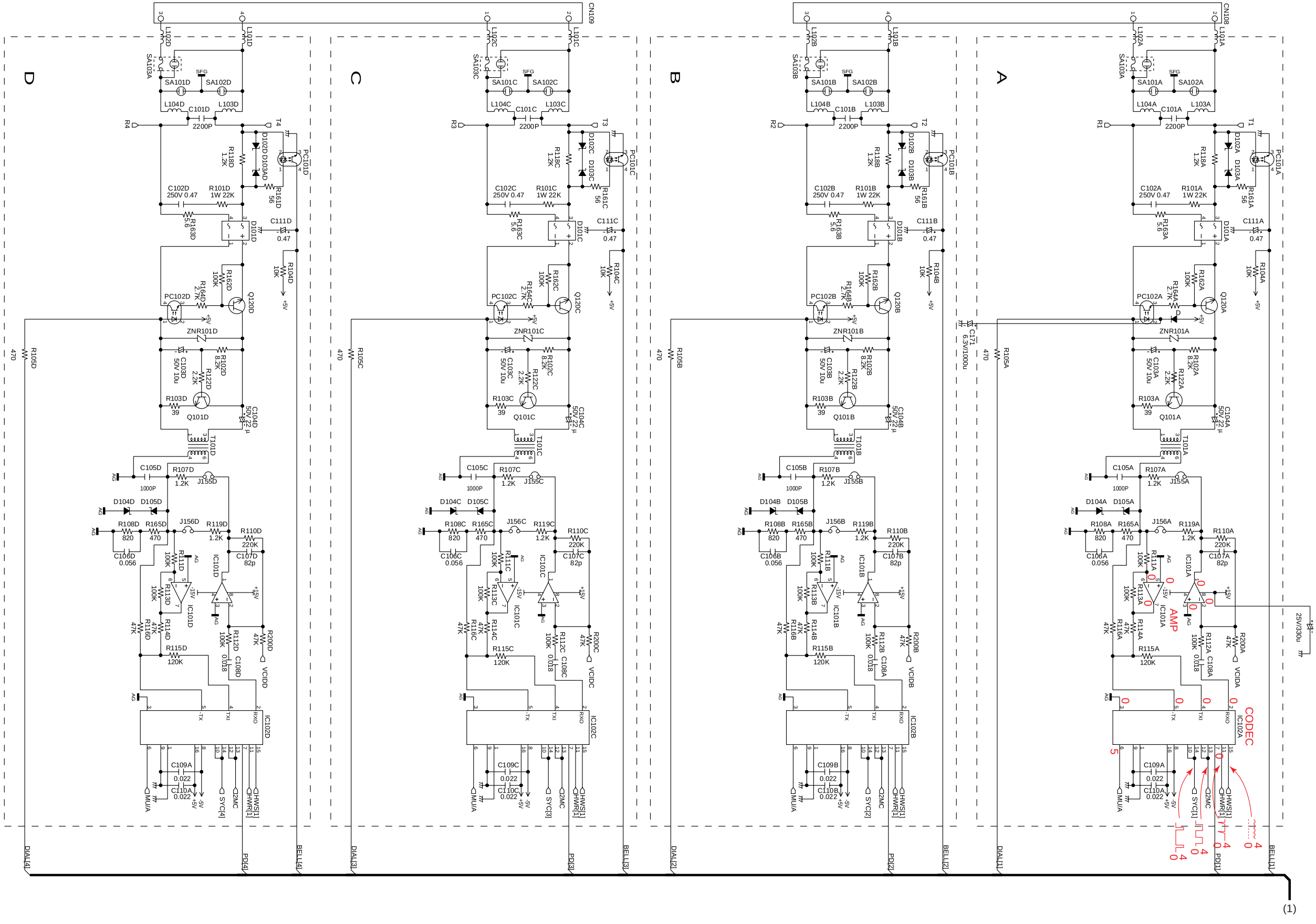
CN200
24 L200H N/M OHCAT
48 H[8]
23 L[8]
47 T[8]
22 R[8]
49 L201H N/M OHCAR

SAME AS E

HH 12 HH
LH 11 LH
RLYH 10 RLYH
BELL
TH 8 TH
RH 7 RH
BGH 9 BGH
BR[2]
OL[2]

(1)(2)

37 SCHEMATIC DIAGRAM (KX-TA123280)



(1)

BELL[1-4],DIAL[1-4],PD[1-4]

IC111

DIAL[1]
PD[1]
BELL[1]
DIAL[2]
PD[2]
BELL[2]
DIAL[3]
PD[3]
BELL[3]
DIAL[4]
PD[4]
BELL[4]

D[0-7]

CN104

D[0]
D[1]
D[2]
D[3]
D[4]
D[5]
D[6]
D[7]

CN112

VCIDA
VCIDB
VCIDC
VCIDD

CN101

HWS[1]
HWR[1]
TIP
RING

IC116

D0N,D1N,D2N,D3N,D4N,D5N,D6N,D7N

R166 100
R167 100
R168 100
R169 100
R170 100
R171 100
R172 100
R173 100

A1,A2,A3,A4

IC117
IC123
IC114
IC118
IC113
IC112

RD
WR
CS
RST
VSS
VDD

J151
J152
J153
J154
MU/A
Q112
R155 10K
R156 10K
R157 10K
R158 10K
R159 10K
R160 10K
C163 22000P
C155 22000P
C164 0.01uF
C151 50V33
C152 50V33
C153 50V33
R125 22K
R126 22K

SYC[1]
SYC[2]
SYC[3]
SYC[4]

2MC
L105

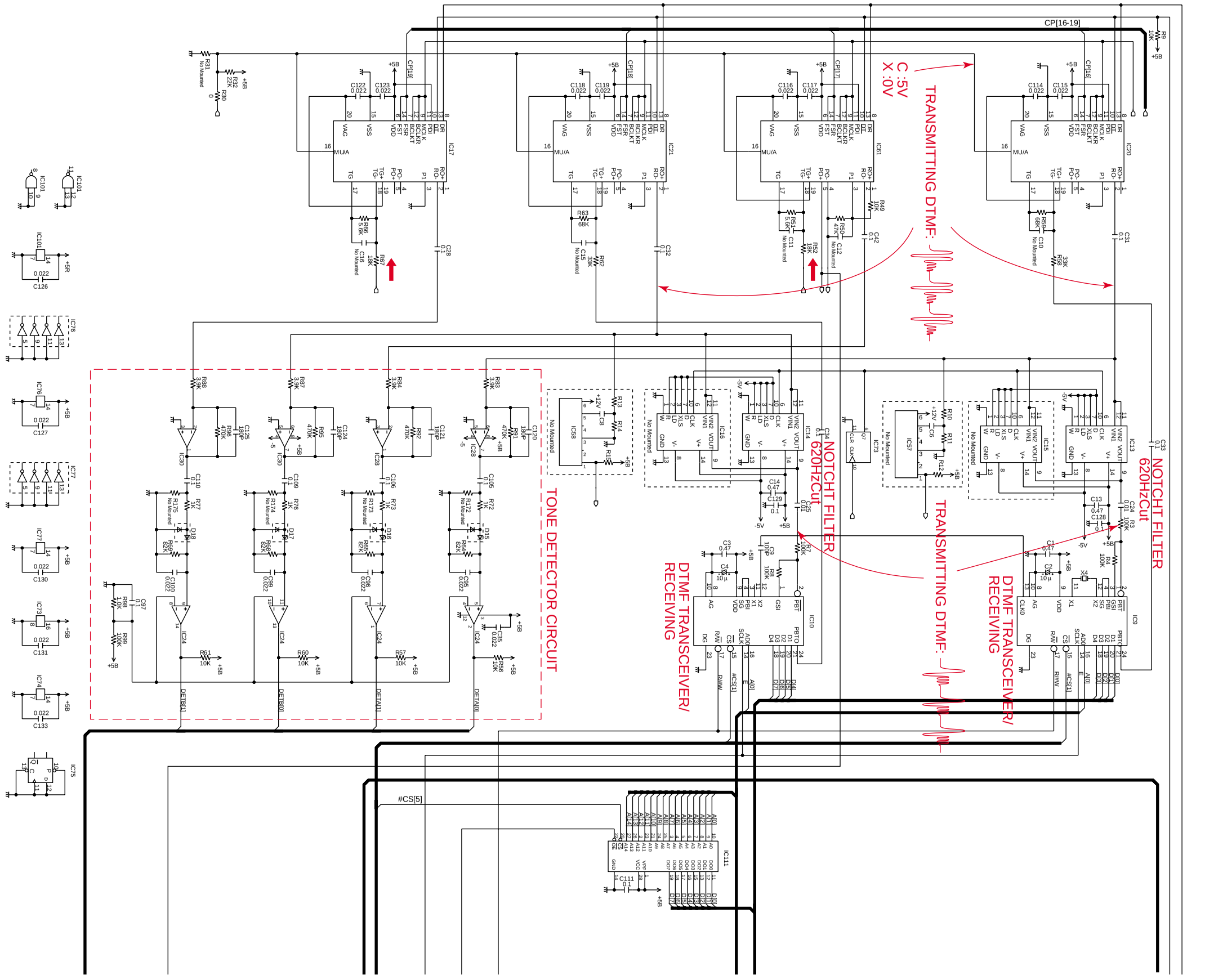
CHS[2]
CHS[3]
CHS[4]
CHS[0]
CHS[1]
C2MN
SRSIN
A1N
A2N
A3N
A4N
A6N
A9N
A10N
A11N
A12N
IOCSN
A5N
GND

CN110
CN105
T1
R1
T2
R2
T3
R3
T4
R4

SA105
Q111
R154 1W220
R153 1.5K
C154 50V1
D154
CN111
FG

C156 0.022 IC112
C157 0.022 IC113
C158 0.022 IC114
C159 0.022 IC116
C165 0.022 IC117
C161 0.022 IC118
C162 0.022 IC123

39 SCHEMATIC DIAGRAM (KX-TA123291)



RECORD/PLAY IC

RECORD/PLAY IC

Auto Gain Control CIRCUIT
(AGC CIRCUIT)

NORMAL :H
RESET :L

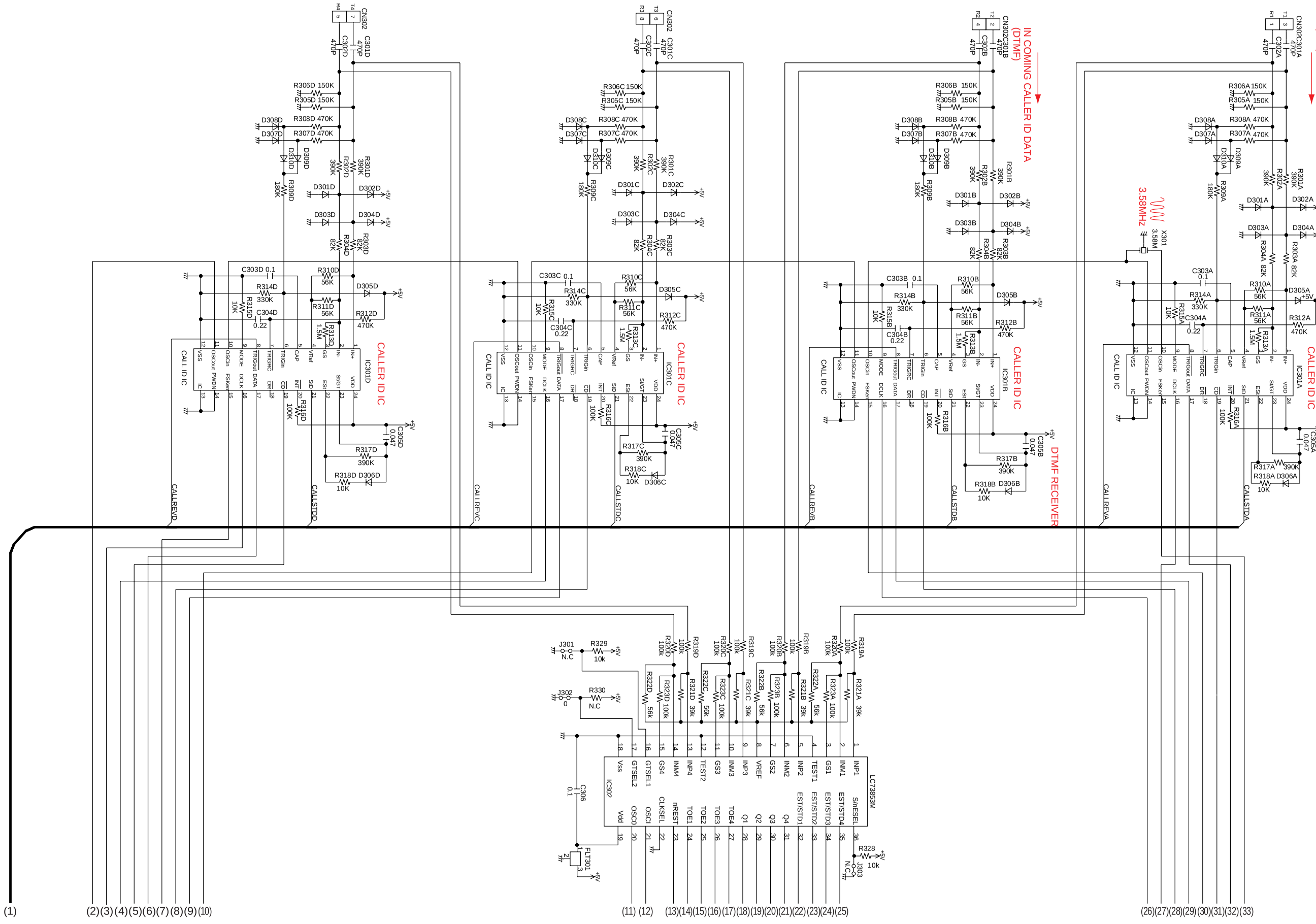
NORMAL :H
RESET :L

NORMAL :L
RESET :H

:FLOW OF VOICE DATA WHEN PLAYING

:FLOW OF VOICE DATA WHEN REC.

41 SCHEMATIC DIAGRAM (KX-TA123293)



SERIAL-PARALLEL
CONVERT IC

IC303A

R331A 47K
R332A 47K
R333A 47K
R334A 47K

C307A 0.022

IC312

X302
4.9152M
4.9152MHz
R335
1M
C308 18P
C309 18P

DTMF RECEIVER CONTROL

R324 22STDD
R325 22STDC
R326 22STDB
R327 22STDA

CALLSTDA
CALLSTDB
CALLSTDC
CALLSTDD
CALLREVA
CALLREVB
CALLREVC
CALLREVD
STDA
STDB
STDC
STDD

IC304
PQVIMS8C5A2G

G/A

TOEC
TOED
DTMFGA
DTMFGB
DTMFGC
DTMFGD
TOEA
TOEB

RST

ADRESS
DATA

DA1,DA2

IC306

IC307
74LS138

IC308
SN74LV273

IC311

IC312

IC310

CN301
PQJP22A45ZA-HT

D0
D1
D2
D3
D4
D5
D6
D7
RST
IORN
IOWN
A1
A2
A3
A4
A5
CIDSEL
CSN

C317 10V33µ

IC305

R337 47K
R336 47K
C316 0.022
C326 0.1

IC309

CN303
PQJP04A45ZA-HT

J304
N.C

C324 0.1

IC303C

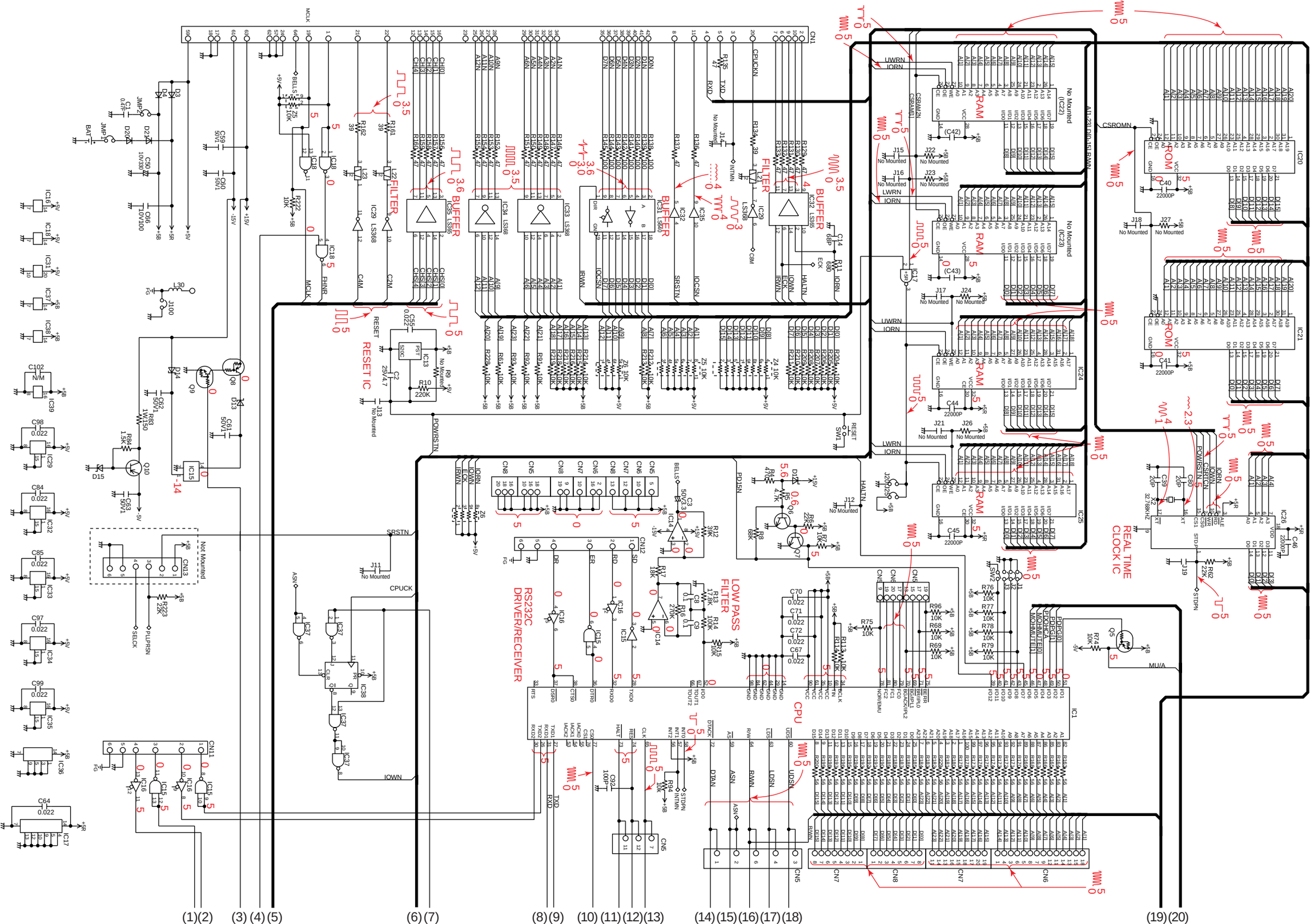
R331C 47K
R332C 47K
R333C 47K
R334C 47K

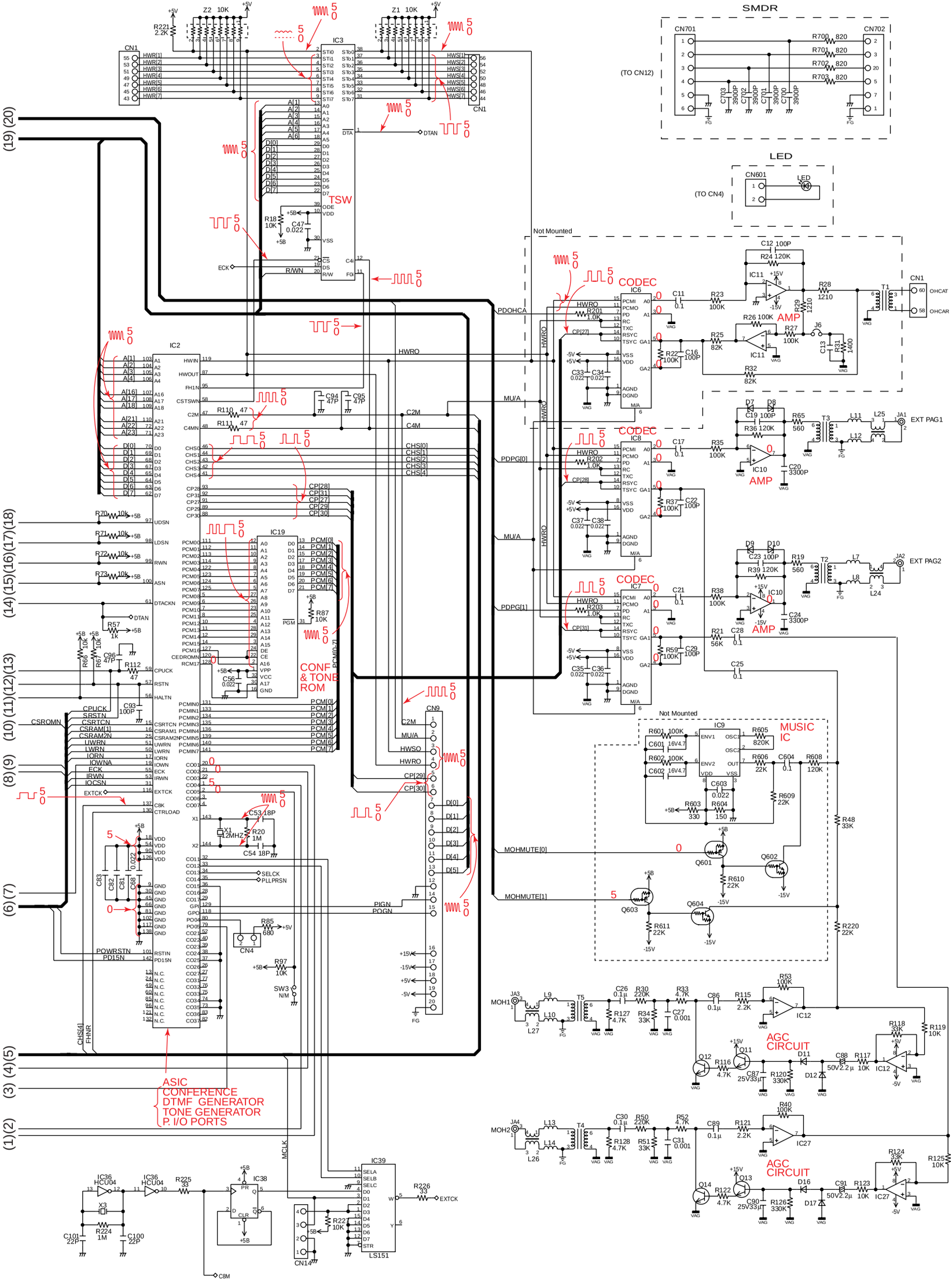
C307C 0.022

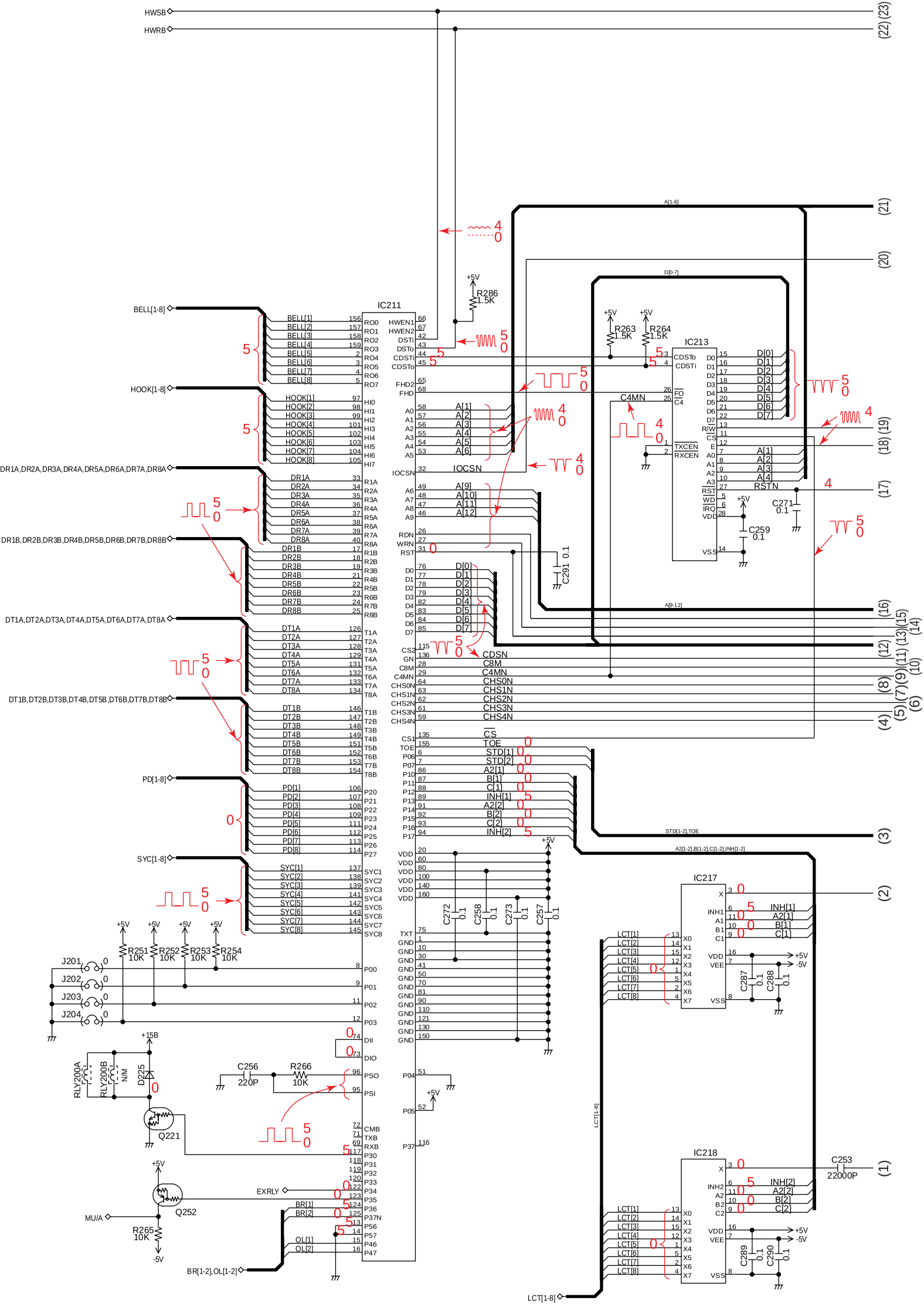
SERIAL-PARALLEL
CONVERT IC

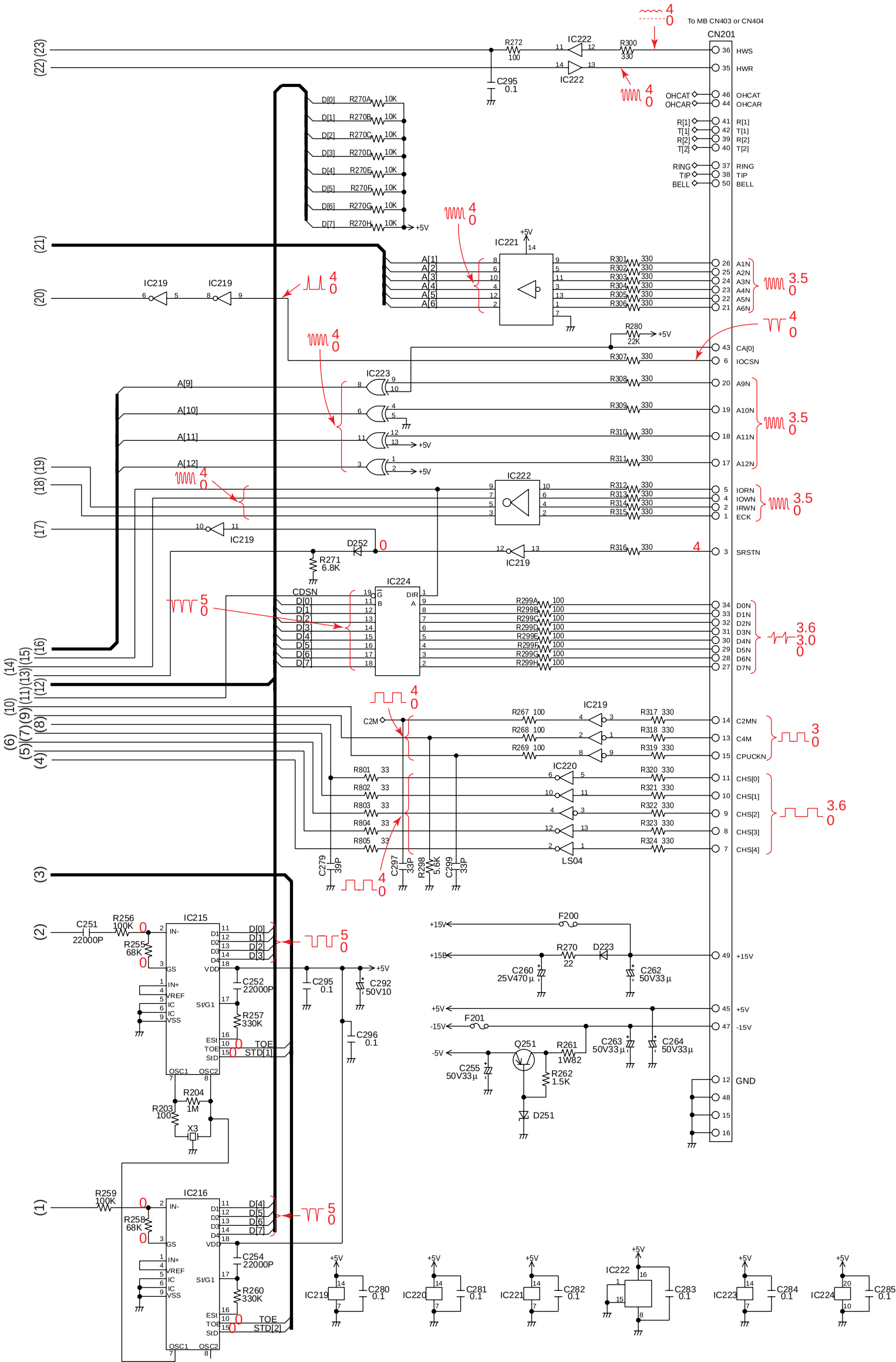
C310 0.1
C311 0.1
C312 0.1

IC307 C318 0.022
IC308 C319 0.022
IC309 C320 0.022
IC310 C321 0.022
IC311 C322 0.022
IC312 C325 0.022


CPU
RS232C DRIVER/RECEIVER
LOW PASS FILTER
REAL TIME CLOCK IC
RESET IC
BUFFER
FILTER
RAM
ROM
(1)(2)
(3)(4)(5)
(6)(7)
(8)(9)
(10)(11)(12)(13)
(14)(15)(16)(17)(18)
(19)(20)


SMDR
CN701
CN702
(TO CN12)
LED
CN601
(TO CN4)
Not Mounted
CODEC
IC6
IC8
IC7
AMP
IC10
IC11
EXT PAG1
EXT PAG2
Not Mounted
MUSIC IC
IC9
AGC CIRCUIT
IC12
IC27
IC2
IC19
CONF & TONE ROM
IC3
TSW
CN1
CN9
IC39
LS151
IC38
IC36 HCU04
CN14
CN4
SW3
ASIC
CONFERENCE
DTMF GENERATOR
TONE GENERATOR
P. I/O PORTS
PDOHCA
PDPG[0]
PDPG[1]
MU/A
HWRO
C2M
C4M
CHS[0]
CHS[1]
CHS[2]
CHS[3]
CHS[4]
CP[27]
CP[28]
CP[31]
CP[29]
CP[30]
PCM[0]
PCM[1]
PCM[2]
PCM[3]
PCM[4]
PCM[5]
PCM[6]
PCM[7]
MOHMUTE[0]
MOHMUTE[1]
EXTCK
C8M
MCLK
PIGN
POGN
CSROMN
POWRSTN
PD15N
CHS[4]
FHNR


HWSB
HWRB
IC211
IC213
IC217
IC218
R286 1.5K
R263 1.5K
R264 1.5K
R251 10K
R252 10K
R253 10K
R254 10K
R265 10K
R266 10K
C256 220P
C253 22000P
C271 0.1
C259 0.1
C291 0.1
C272 0.1
C258 0.1
C273 0.1
C257 0.1
C287 0.1
C288 0.1
C289 0.1
C290 0.1
Q221
Q252
D225
RLY200A
RLY200B
J201
J202
J203
J204
BELL[1-8]
HOOK[1-8]
DR1A,DR2A,DR3A,DR4A,DR5A,DR6A,DR7A,DR8A
DR1B,DR2B,DR3B,DR4B,DR5B,DR6B,DR7B,DR8B
DT1A,DT2A,DT3A,DT4A,DT5A,DT6A,DT7A,DT8A
DT1B,DT2B,DT3B,DT4B,DT5B,DT6B,DT7B,DT8B
PD[1-8]
SYC[1-8]
A[1-6]
D[0-7]
A[9-12]
STD[1-2],TOE
A2[1-2],B[1-2],C[1-2],INH[1-2]
LCT[1-8]
BR[1-2],OL[1-2]
IOCSN
CDSN
C8M
C4MN
CHS0N
CHS1N
CHS2N
CHS3N
CHS4N
RSTN
EXRLY
MU/A


To MB CN403 or CN404
CN201
HWS
HWR
OHCAT
OHCAR
R[1]
T[1]
R[2]
T[2]
RING
TIP
BELL
IC222
IC221
IC219
IC223
IC224
IC220
IC215
IC216
R272 100
R300 330
C295 0.1
R270A 10K
R270B 10K
R270C 10K
R270D 10K
R270E 10K
R270F 10K
R270G 10K
R270H 10K
+5V
A[1]
A[2]
A[3]
A[4]
A[5]
A[6]
R301 330
R302 330
R303 330
R304 330
R305 330
R306 330
A1N
A2N
A3N
A4N
A5N
A6N
3.5
R280 22K
CA[0]
R307 330
IOCSN
A[9]
A[10]
A[11]
A[12]
R308 330
R309 330
R310 330
R311 330
A9N
A10N
A11N
A12N
R312 330
R313 330
R314 330
R315 330
IORN
IOWN
IRWN
ECK
D252
R271 6.8K
R316 330
SRSTN
CDSN
D[0]
D[1]
D[2]
D[3]
D[4]
D[5]
D[6]
D[7]
R299A 100
R299B 100
R299C 100
R299D 100
R299E 100
R299F 100
R299G 100
R299H 100
D0N
D1N
D2N
D3N
D4N
D5N
D6N
D7N
3.6
3.0
C2M
R267 100
R268 100
R269 100
R317 330
R318 330
R319 330
C4M
CPUCKN
R801 33
R802 33
R803 33
R804 33
R805 33
R320 330
R321 330
R322 330
R323 330
R324 330
CHS[0]
CHS[1]
CHS[2]
CHS[3]
CHS[4]
LS04
C279 39P
C297 33P
R298 5.6K
C299 33P
C251 22000P
R256 100K
R255 68K
GS
IN+
VREF
IC
VSS
VDD
C252 22000P
St/G1
R257 330K
ESt
TOE
StD
STD[1]
OSC1
OSC2
R204 1M
R203 100
X3
C296 0.1
C292 50V10
F200
F201
+15V
-15V
-5V
R270 22
D223
C260 25V470µ
C262 50V33µ
C263 50V33µ
C264 50V33µ
C255 50V33µ
Q251
R261 1W82
R262 1.5K
D251
GND
R259 100K
R258 68K
C254 22000P
R260 330K
STD[2]
C280 0.1
C281 0.1
C282 0.1
C283 0.1
C284 0.1
C285 0.1

A

B

C

D

Same as B

Same as B

OVER LOAD DETECT

HOOK DETECT

RING TRIP DETECT

COMPARATOR

CODEC

BREAK CONTROL 1

BREAK CONTROL 2

OVER LOAD DETECT 1

OVER LOAD DETECT 2

(1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) (12)(13)(14)(15)(16)

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16)

H

G

F

E

Same as E

Same as E

Same as E

CN200

L201H N/M L200H N/M

L201G N/M L200G N/M

L201F N/M L200F N/M

L201E N/M L200E N/M

OHCAR OHCAT

L203E L202E

ZNR205E ZNR204E

C200E 50V2.2

T201E

RLY202E

ZNR202E ZNR203E

C213E C212E 0.01

R275E 56K

R224E 15K C220E 0.039μ

R225E 33K

C206E 50V10 C205E 50V4.7

R210E 6.8K R207E 6.8K

Q204E Q203E

D206E D207E D204E D205E

C222E 50V10 C204E 50V10

R208E 22 R205E 22

R209E 68 R206E 68

Q206E Q205E

J256E 0 J257E

R220E 110K R222E 300

R211E 300

J250E J251E

R227E 47K R226E 10K

D210E D211E

C211E 4.7 R228E 15K R229E 15K

R232E 2W1K

R219E 110K

C207E

J254E J255E

R212E 2.4K

R216E 100K

J252E 0 J253E 0

R213E 3K J260E

R217E 100K

D212E D213E

R230E 10K

Q207E

R904E 100

D214E

RLY202E

R231E 1K

R290E 4.7K

C210E 22000P

R295E 100

Q200E

R233E 5.6 R289E 5.6 R903E 5.6

R248E 560

C216E 50V2.2 C202E 50V2.2

R238E 33 R200E 33

R239E 2.2K R201E 2.2K

C219E 0.1

Q208E Q201E

R240E 2.2K R202E 2.2K

R237E 4.7K R235E 4.7K

R236E 2.2K C218E 68P C217E 68P R234E 2.2K

IC203E

R276E 56 R277E 56 R278E 56 R279E 56

R291E 4.7K R292E 4.7K

R330E 0 R214E 82K C299E 220P

R215E 110K C208E 0

R221E 91K R902E 0 C900E 560P C209E 22000P

R900E 91K R901E C901E 56P

IC201E

TG TI- TI+ VAG MU/A VSS VDD PO- MCLK BCLKR BCLKT PO+ FSR PI- PI+ DR DT PDI FSX SYCI

C265 0.1μ R294 1.2K R293 6.8K

C270 10V100

VREF +5V -15V

MU/A C2M HWRB HWSB BELL

DR8A DR8B DT8A DT8B BELL HWSB HWRB PDI[8] C2M SYCI[8] MU/A LCTI[8] HOOK[8] BELL[8] BR2 OL2

DR7A DR7B DT7A DT7B BELL HWSB HWRB PDI[7] C2M SYCI[7] MU/A LCTI[7] HOOK[7] BELL[7] BR2 OL2

DR6A DR6B DT6A DT6B BELL HWSB HWRB PDI[6] C2M SYCI[6] MU/A LCTI[6] HOOK[6] BELL[6] BR2 OL2

BR2 OL2 HOOK[5] BELL[5]

MU/A LCTI[1]

C2M SYCI[1] PDI[1] HWRB HWSB

BELL DT5B DT5A DR5B DR5A

DR1A,DR2A,DR3A,DR4A,DR5A,DR6A,DR7A,DR8A

DR1B,DR2B,DR3B,DR4B,DR5B,DR6B,DR7B,DR8B

DT1A,DT2A,DT3A,DT4A,DT5A,DT6A,DT7A,DT8A

DT1B,DT2B,DT3B,DT4B,DT5B,DT6B,DT7B,DT8B

PDI[1-8]

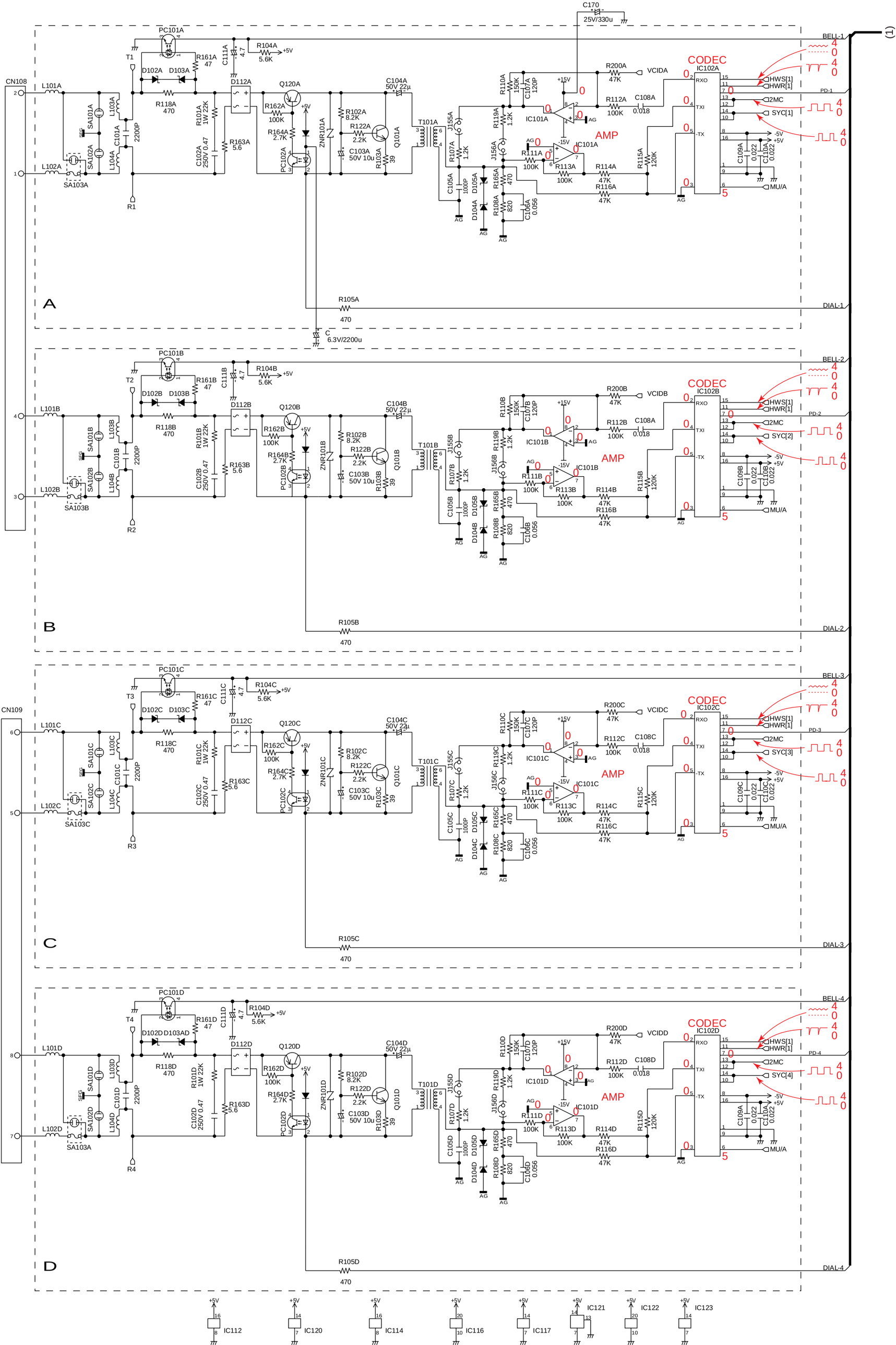
SYCI[1-8]

LCTI[1-8]

HOOK[1-8]

BELL[1-8]

MU/A C2M HWRB HWSB BELL


C170
25V/330u
CN108
CN109
L101A
L102A
L101B
L102B
L101C
L102C
L101D
L102D
SA103A
SA103B
SA103C
PC101A
PC101B
PC101C
PC101D
T1
T2
T3
T4
R1
R2
R3
R4
D102A D103A
D102B D103B
D102C D103C
D102D D103AD
R118A 470
R118B 470
R118C 470
R118D 470
R161A 47
R161B 47
R161C 47
R161D 47
C111A 4.7
C111B 4.7
C111C 4.7
C111D 4.7
R104A 5.6K
R104B 5.6K
R104C 5.6K
R104D 5.6K
+5V
D112A
D112B
D112C
D112D
Q120A
Q120B
Q120C
Q120D
R162A 100K
R162B 100K
R162C 100K
R162D 100K
R164A 2.7K
R164B 2.7K
R164C 2.7K
R164D 2.7K
PC102A
PC102B
PC102C
PC102D
ZNR101A
ZNR101B
ZNR101C
ZNR101D
R102A 8.2K
R102B 8.2K
R102C 8.2K
R102D 8.2K
R122A 2.2K
R122B 2.2K
R122C 2.2K
R122D 2.2K
C103A 50V 10u
C103B 50V 10u
C103C 50V 10u
C103D 50V 10u
C104A 50V 22µ
C104B 50V 22µ
C104C 50V 22µ
C104D 50V 22µ
Q101A
Q101B
Q101C
Q101D
R103A 39
R103B 39
R103C 39
R103D 39
T101A
T101B
T101C
T101D
R101A 1W 22K
R101B 1W 22K
R101C 1W 22K
R101D 1W 22K
C102A 250V 0.47
C102B 250V 0.47
C102C 250V 0.47
C102D 250V 0.47
R163A 5.6
R163B 5.6
R163C 5.6
R163D 5.6
C101A 2200P
C101B 2200P
C101C 2200P
C101D 2200P
L103A
L103B
L103C
L103D
L104A
L104B
L104C
L104D
SA101A
SA101B
SA101C
SA101D
SA102A
SA102B
SA102C
SA102D
SEG
R105A 470
R105B 470
R105C 470
R105D 470
C 6.3V/2200u
A
B
C
D
BELL-1
BELL-2
BELL-3
BELL-4
DIAL-1
DIAL-2
DIAL-3
DIAL-4
PD-1
PD-2
PD-3
PD-4
(1)
CODEC
IC102A
IC102B
IC102C
IC102D
RXO
TXI
TX
HWS[1]
HWR[1]
2MC
SYC[1]
SYC[2]
SYC[3]
SYC[4]
-5V
+5V
MU/A
C109A 0.022
C110A 0.022
C109B 0.022
C110B 0.022
C109C 0.022
C110C 0.022
C109D 0.022
C110D 0.022
R200A 47K
R200B 47K
R200C 47K
R200D 47K
VCIDA
VCIDB
VCIDC
VCIDD
R112A 100K
R112B 100K
R112C 100K
R112D 100K
C108A 0.018
C108B 0.018
C108C 0.018
C108D 0.018
IC101A
IC101B
IC101C
IC101D
AMP
R111A 100K
R111B 100K
R111C 100K
R111D 100K
R113A 100K
R113B 100K
R113C 100K
R113D 100K
R114A 47K
R114B 47K
R114C 47K
R114D 47K
R116A 47K
R116B 47K
R116C 47K
R116D 47K
R115A 120K
R115B 120K
R115C 120K
R115D 120K
R110A 150K
R110B 150K
R110C 150K
R110D 150K
C107A 120P
C107B 120P
C107C 120P
C107D 120P
R119A 1.2K
R119B 1.2K
R119C 1.2K
R119D 1.2K
R107A 1.2K
R107B 1.2K
R107C 1.2K
R107D 1.2K
J155A
J155B
J155C
J155D
J156A
J156B
J156C
J156D
R165A 470
R165B 470
R165C 470
R165D 470
R108A 820
R108B 820
R108C 820
R108D 820
C106A 0.056
C106B 0.056
C106C 0.056
C106D 0.056
C105A 1000P
C105B 1000P
C105C 1000P
C105D 1000P
D105A
D105B
D105C
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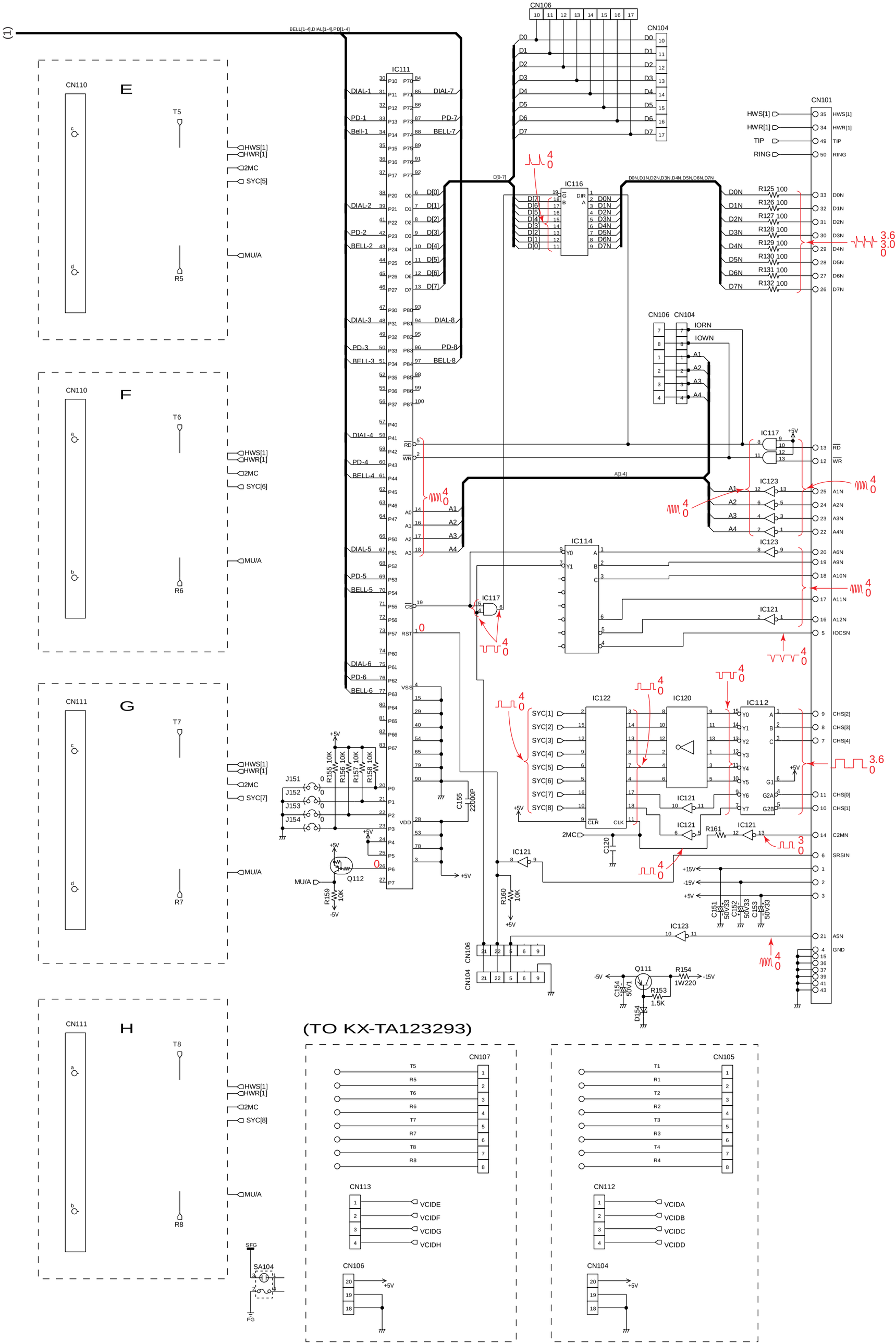
IC122
IC123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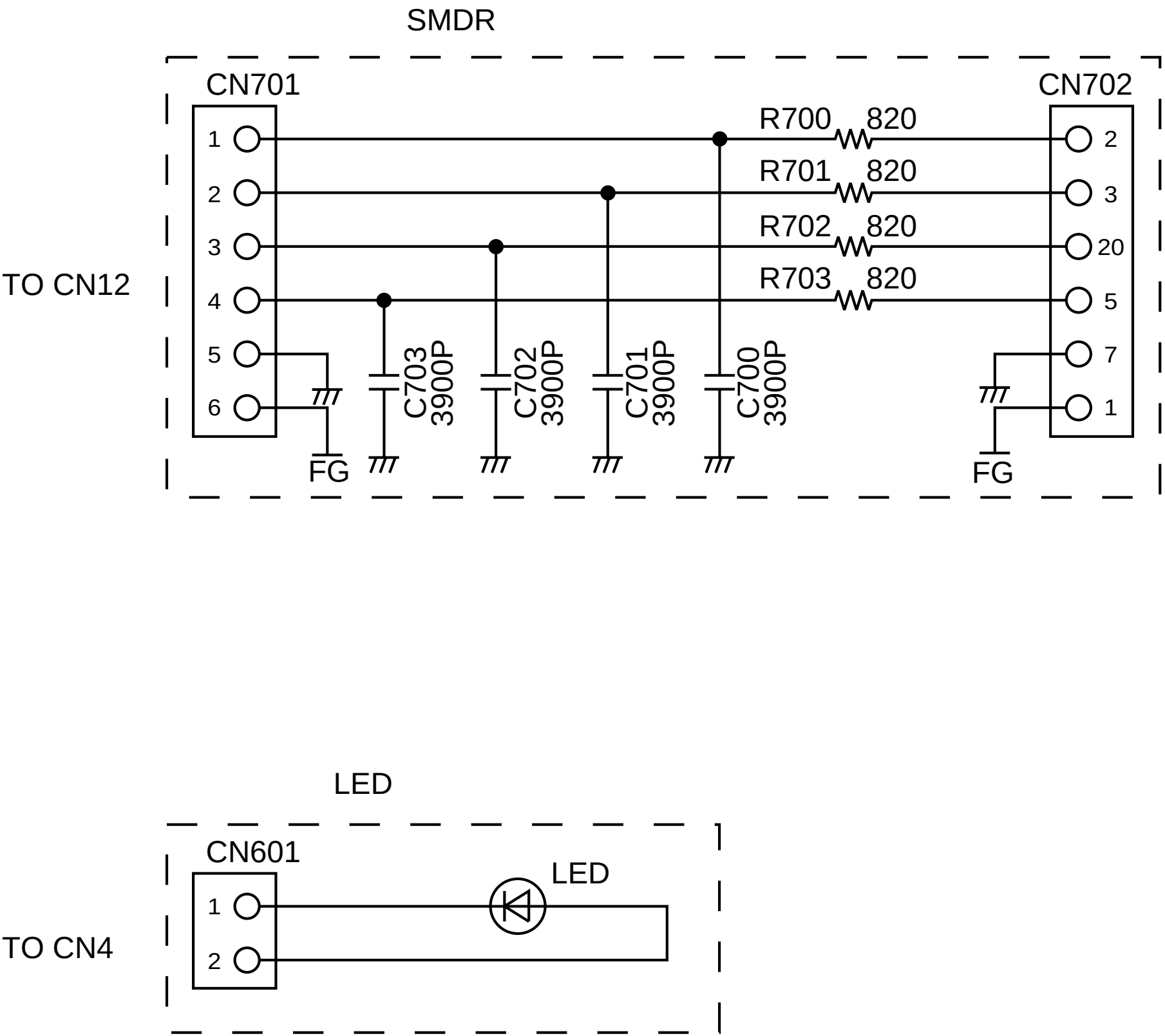
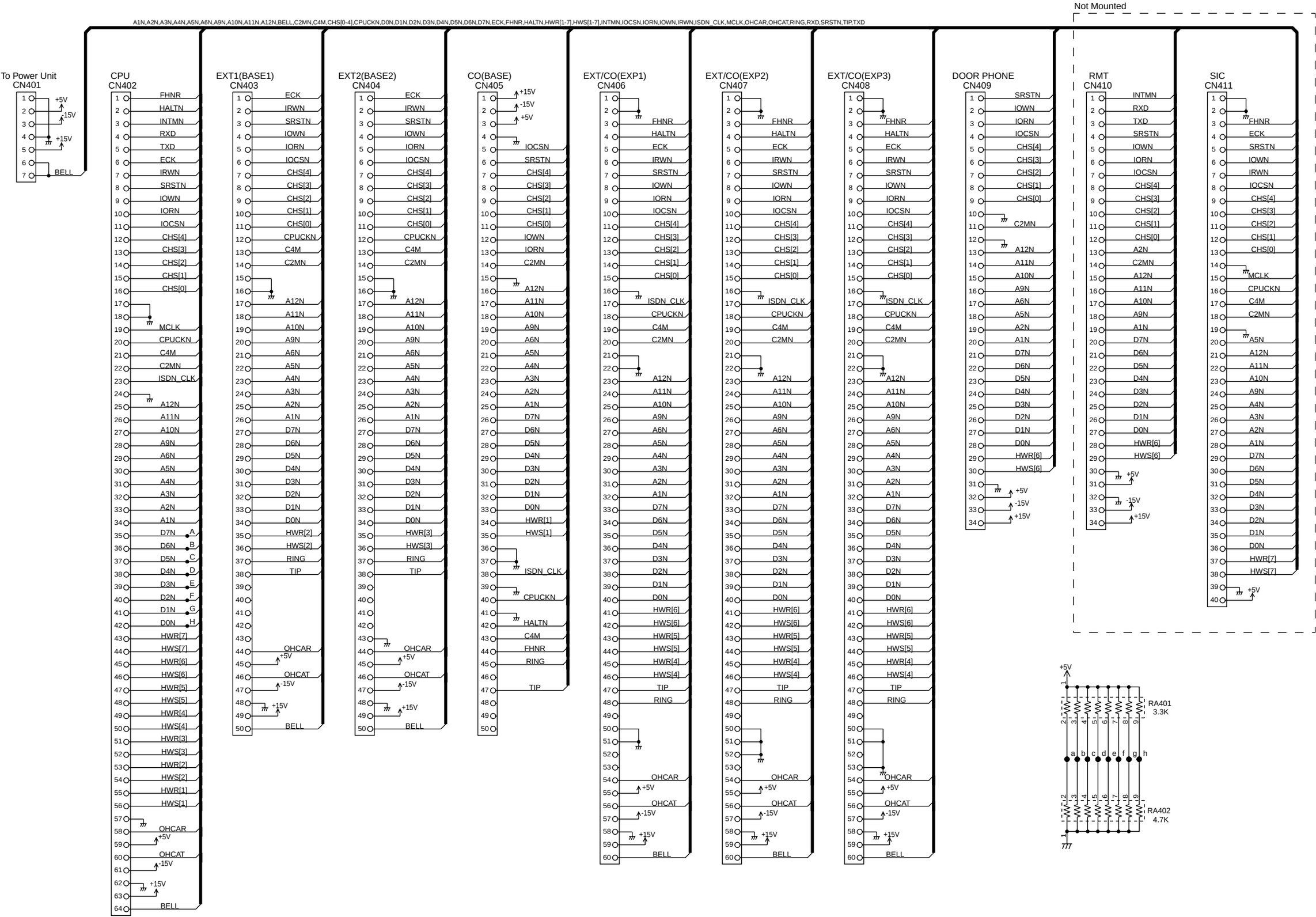
BELL[1-4],DIAL[1-4],PD[1-4]
E
F
G
H
CN110
CN111
T5
T6
T7
T8
R5
R6
R7
R8
HWS[1]
HWR[1]
2MC
SYC[5]
SYC[6]
SYC[7]
SYC[8]
MU/A
IC111
IC116
IC114
IC122
IC120
IC112
IC123
IC121
IC117
CN106
CN104
CN101
D[0-7]
D0N,D1N,D2N,D3N,D4N,D5N,D6N,D7N
A[1-4]
J151
J152
J153
J154
Q112
Q111
R155 10K
R156 10K
R157 10K
R158 10K
R159 10K
R160 10K
R161
R154 1W220
R153 1.5K
C155 2200P
C120
C151 50V33
C152 50V33
C153 50V33
C154 50V1
D154
SA104
SFG
FG
(TO KX-TA123293)
CN107
CN105
CN113
CN112
VCIDE
VCIDF
VCIDG
VCIDH
VCIDA
VCIDB
VCIDC
VCIDD
+5V
-5V
+15V
-15V


SMDR
CN701
CN702
TO CN12
1
2
3
4
5
6
R700 820
R701 820
R702 820
R703 820
C703 3900P
C702 3900P
C701 3900P
C700 3900P
FG
FG
2
3
20
5
7
1
LED
CN601
LED
TO CN4
1
2


Not Mounted
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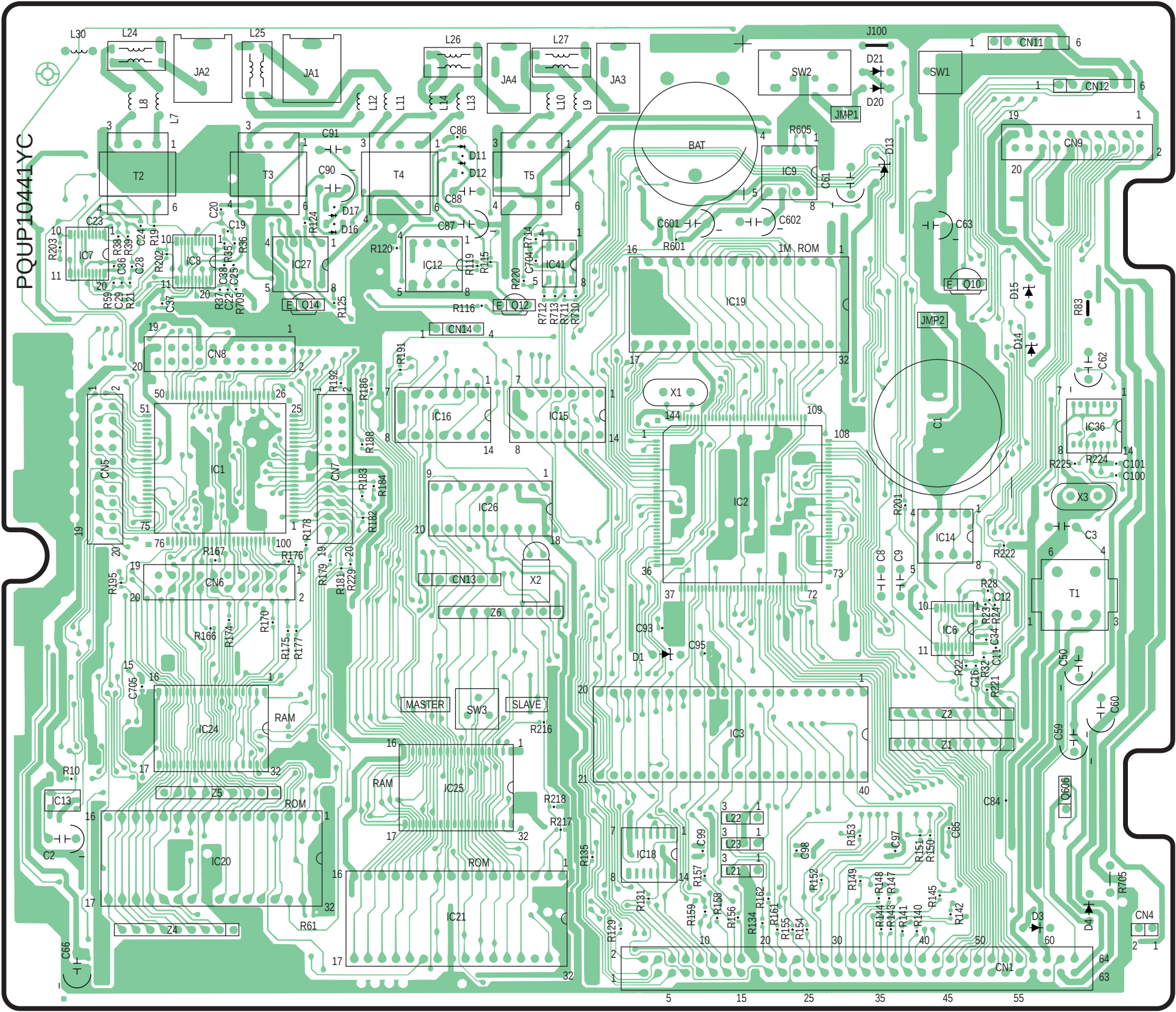
To Power Unit
CN401
CPU
CN402
EXT1(BASE1)
CN403
EXT2(BASE2)
CN404
CO(BASE)
CN405
EXT/CO(EXP1)
CN406
EXT/CO(EXP2)
CN407
EXT/CO(EXP3)
CN408
DOOR PHONE
CN409
RMT
CN410
SIC
CN411
RA401
3.3K
RA402
4.7K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L30
L24
L25
L26
L27
JA2
JA1
JA4
JA3
J100
SW2
SW1
D21
D20
CN11
CN12
JMP1
L8
L7
L12
L11
L14
L13
L10
L9
T2
T3
T4
T5
C91
C90
C86
D11
D12
C88
D17
D16
C87
BAT
R605
IC9
C61
D13
CN9
C23
C20
C19
C24
R124
R120
IC12
R119
R115
C704
R714
IC41
C601
C602
R601
1M ROM
IC19
C63
E Q10
D15
R83
JMP2
D14
IC7
IC8
IC27
E Q14
E Q12
R125
R116
R220
R712
R713
R711
R710
C62
CN14
CN8
R191
X1
IC36
R225
R224
C101
C100
X3
CN5
IC1
CN7
R192
R186
IC16
IC15
R188
R183
R184
IC26
IC2
C1
C3
T1
R201
IC14
R222
C8
C9
R28
C12
R23
R24
C34
IC6
C11
R22
C16
R32
R221
C50
C60
C59
R178
R182
R167
R176
CN6
R195
R179
R181
R229
CN13
X2
Z6
R166
R174
R170
R175
R177
C93
C95
D1
C705
IC24
RAM
MASTER
SW3
SLAVE
R216
IC3
Z2
Z1
R10
IC13
Z5
ROM
IC25
R218
R217
C84
Q606
C2
IC20
IC18
L22
L23
L21
C99
C98
C97
C85
R153
R151
R150
R157
R152
R149
R148
R147
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R131
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R158
R156
R162
R161
R155
R154
R134
R145
R144
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R140
R142
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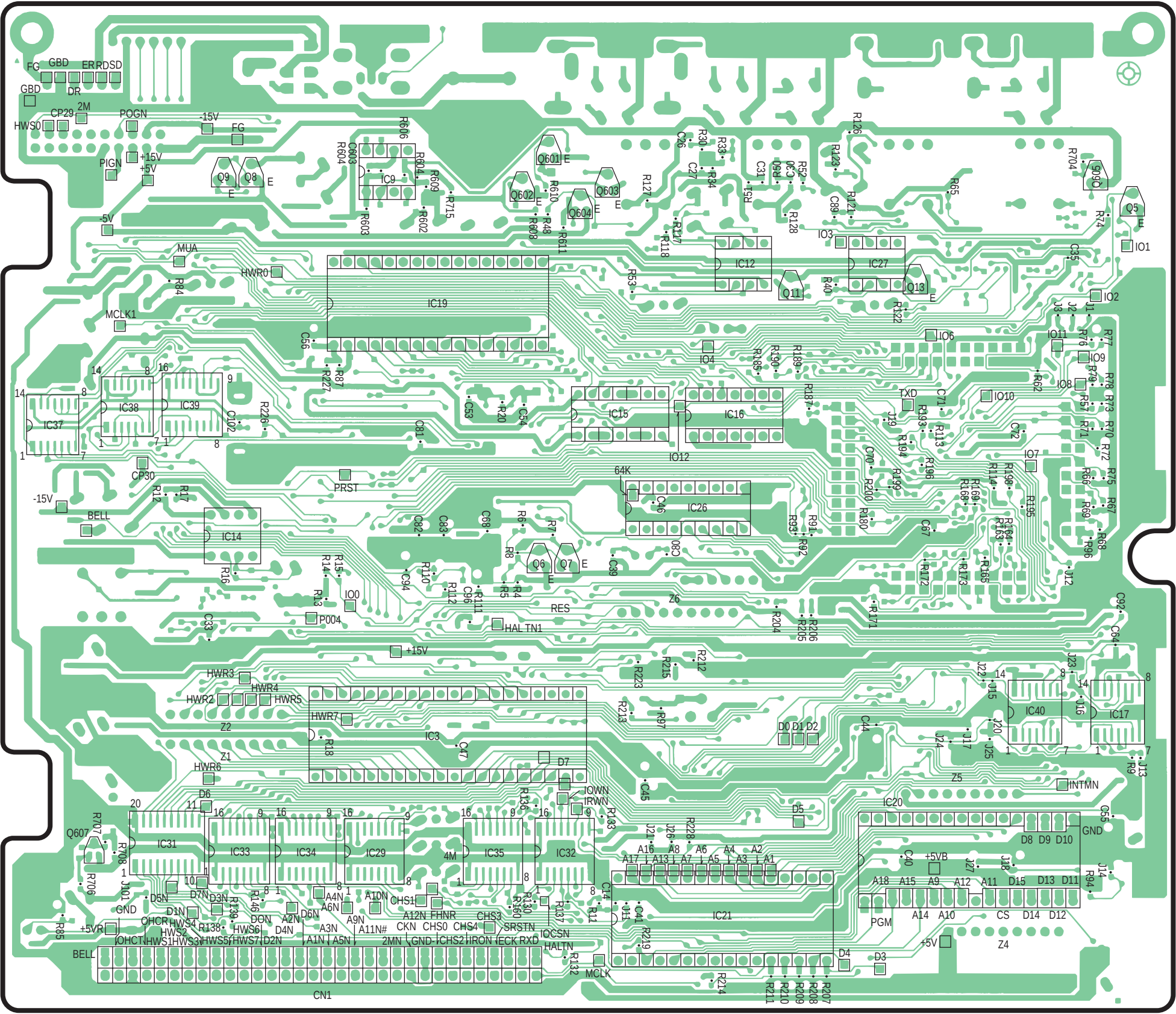
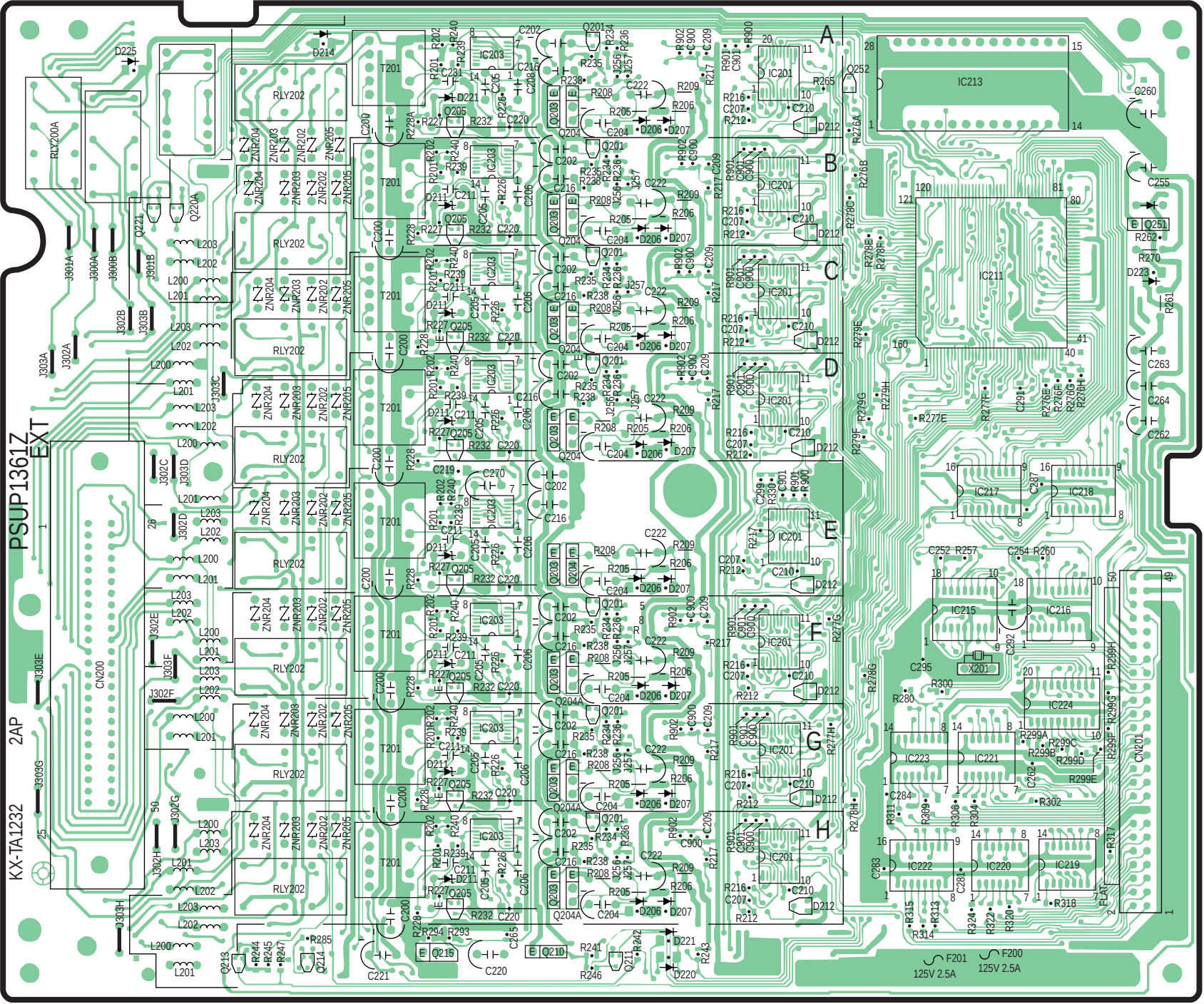
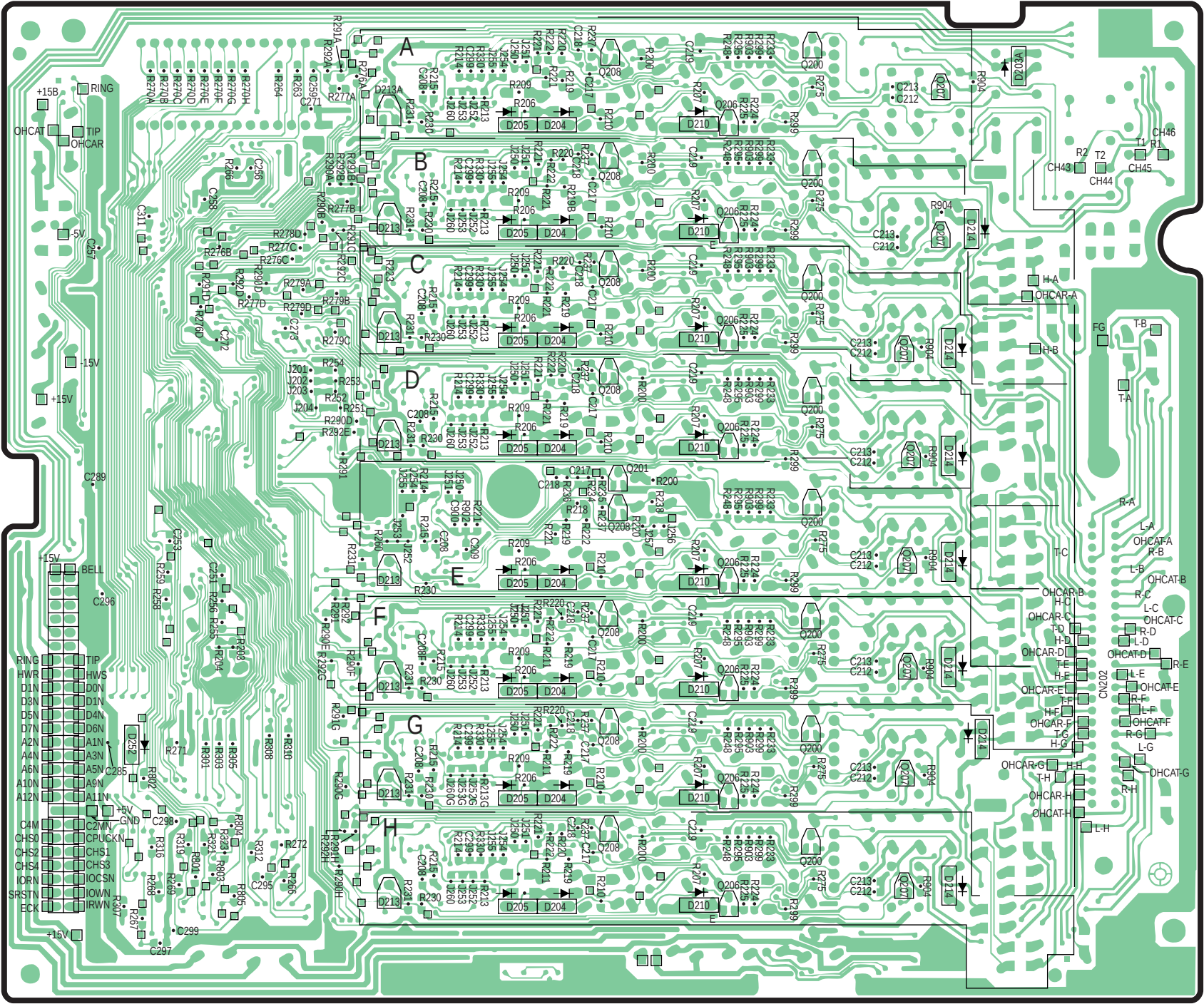
D4
CN4
R61
Z4
IC21
R129
C66
CN1


FG GBD ERR DSD
GBD DR
CP29 2M POGN -15V FG
HWS0 PIGN +15V +5V
-5V
MUA HWR0 MCLK1
IC19 IC38 IC39 IC37 IC14 IC9 IC12 IC27 IC15 IC16 IC26 IC3 IC31 IC33 IC34 IC29 IC35 IC32 IC40 IC17 IC20 IC21
Q601 Q602 Q603 Q604 Q9 Q8 Q6 Q7 Q11 Q13 Q607
IO0 IO1 IO2 IO3 IO4 IO6 IO7 IO8 IO9 IO10 IO11 IO12
PRST CP30 BELL RES HALTN1 P004
64K TXD
HWR2 HWR3 HWR4 HWR5 HWR6 HWR7
Z1 Z2 Z4 Z5 Z6
IOWN IRWN IOCSN MCLK
INTMN PGM CS
CN1


PSUP1361Z EXT
KX-TA1232 2AP
F201 125V 2.5A
F200 125V 2.5A


A
B
C
D
E
F
G
H
+15B
RING
OHCAT
TIP
OHCAR
-5V
-15V
+15V
BELL
+5V
GND
C2MN
CPUCKN
CHS1
CHS3
IOCSN
IOWN
IRWN
ECK
C2MP
CHS0
CHS2
CHS4
IORN
SRSTN
RING
HWR
D1N
D3N
D5N
D7N
A2N
A4N
A6N
A10N
A12N
TIP
HWS
D0N
D1N
D4N
D6N
A1N
A3N
A5N
A9N
A11N
H-A
OHCAR-A
H-B
T-B
T-A
R-A
L-A
OHCAT-A
R-B
L-B
OHCAT-B
T-C
R-C
L-C
OHCAT-C
OHCAR-B
H-C
OHCAR-C
T-D
R-D
H-D
OHCAT-D
OHCAR-D
T-E
R-E
H-E
L-E
OHCAT-E
OHCAR-E
T-F
R-F
H-F
L-F
OHCAT-F
OHCAR-F
T-G
R-G
H-G
L-G
OHCAT-G
OHCAR-G
T-H
R-H
H-H
L-H
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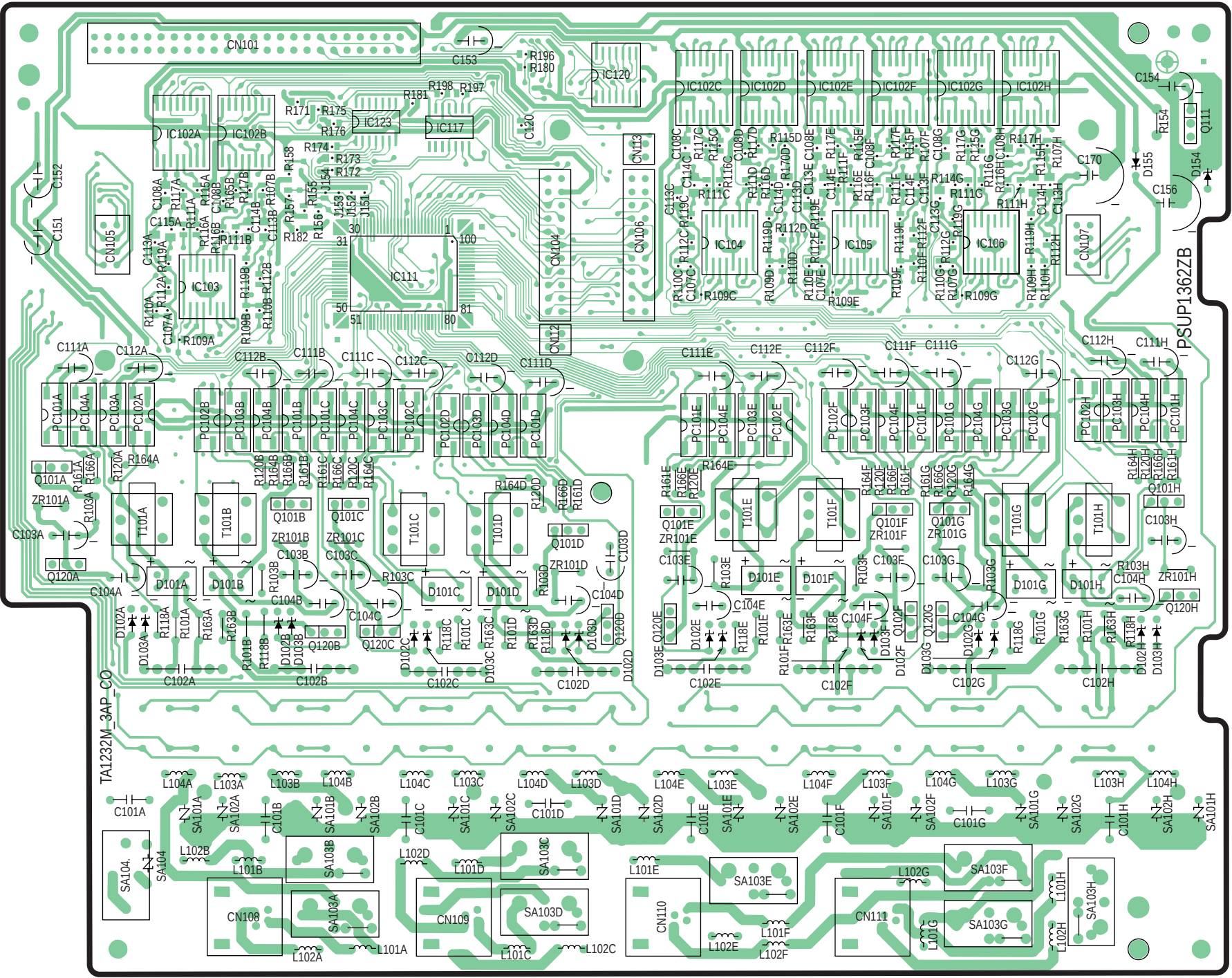
OHCAR-H
CH46
CH45
CH44
CH43
T1
R1
T2
R2
FG
CN2
2012


PSUP1362ZB
TA1232M_3AP_CO
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IC102D
IC102E
IC102F
IC102G
IC102H
IC103
IC104
IC105
IC106
IC107
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IC120
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D154
D155
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R198
R197
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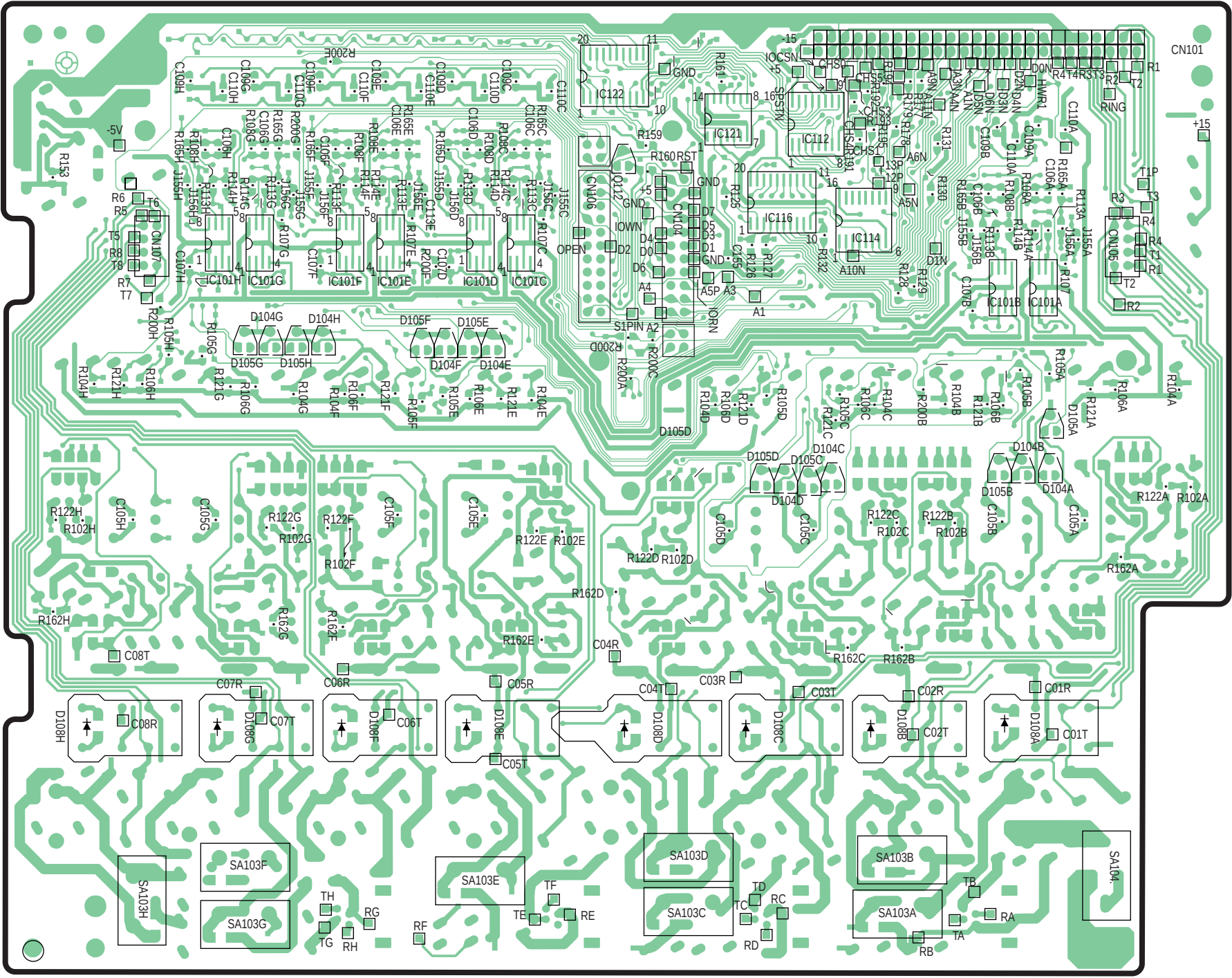
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IORN
SPSTN
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+5
+15
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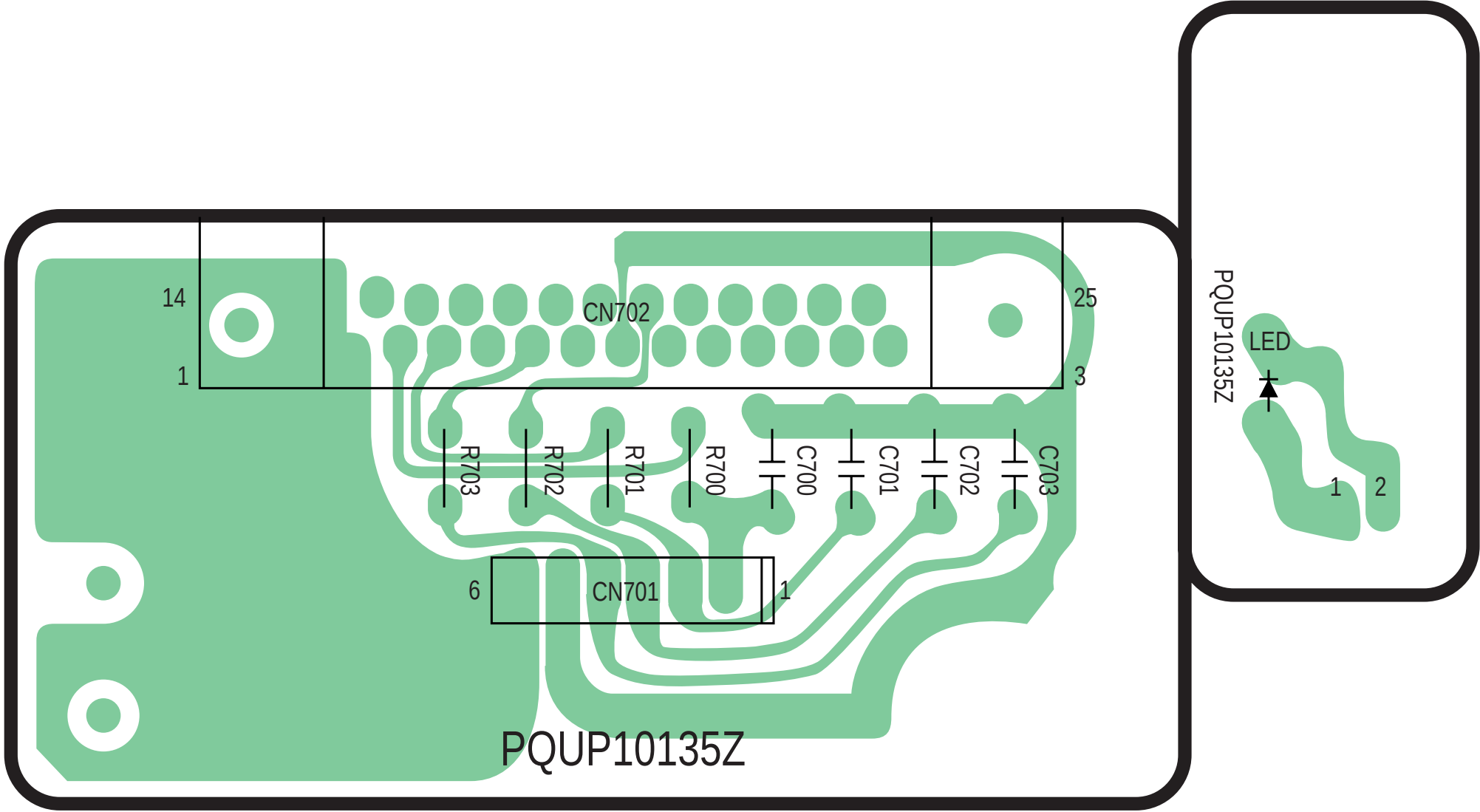
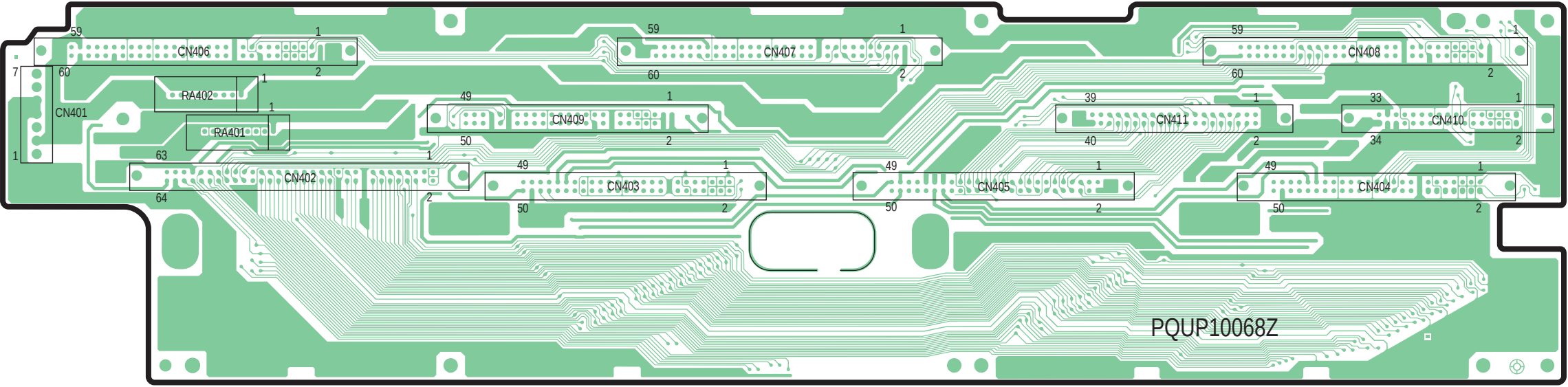
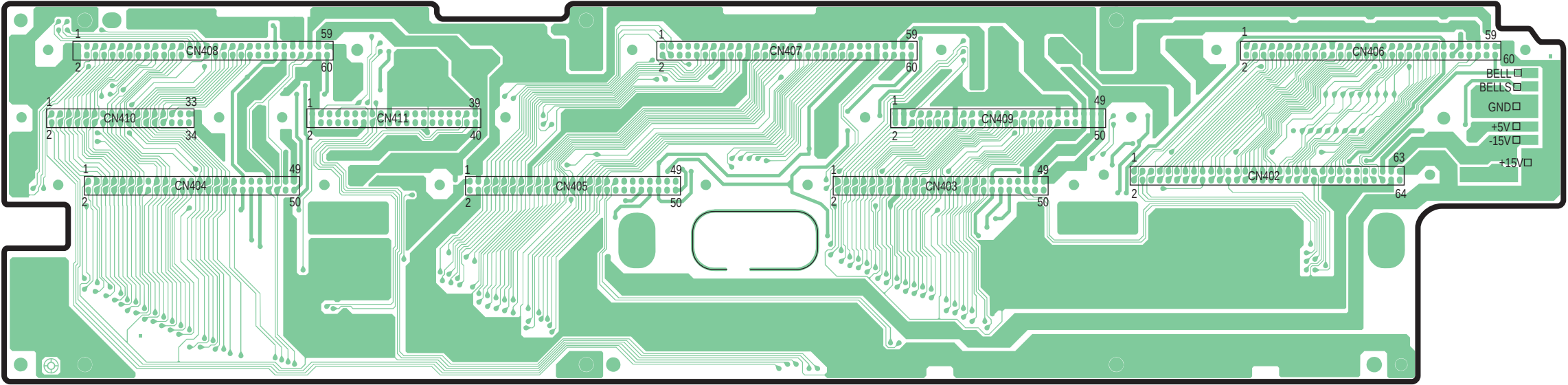
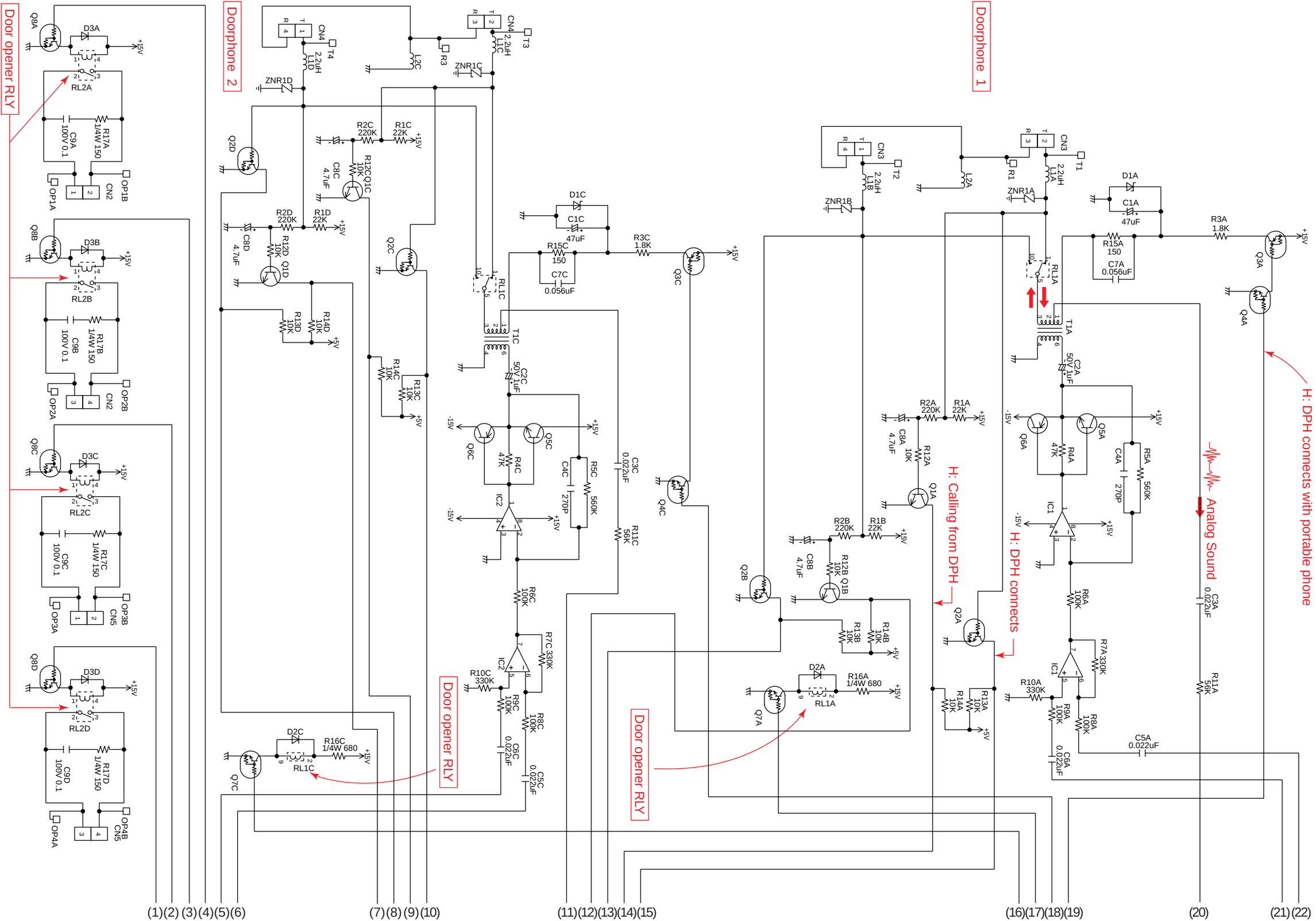
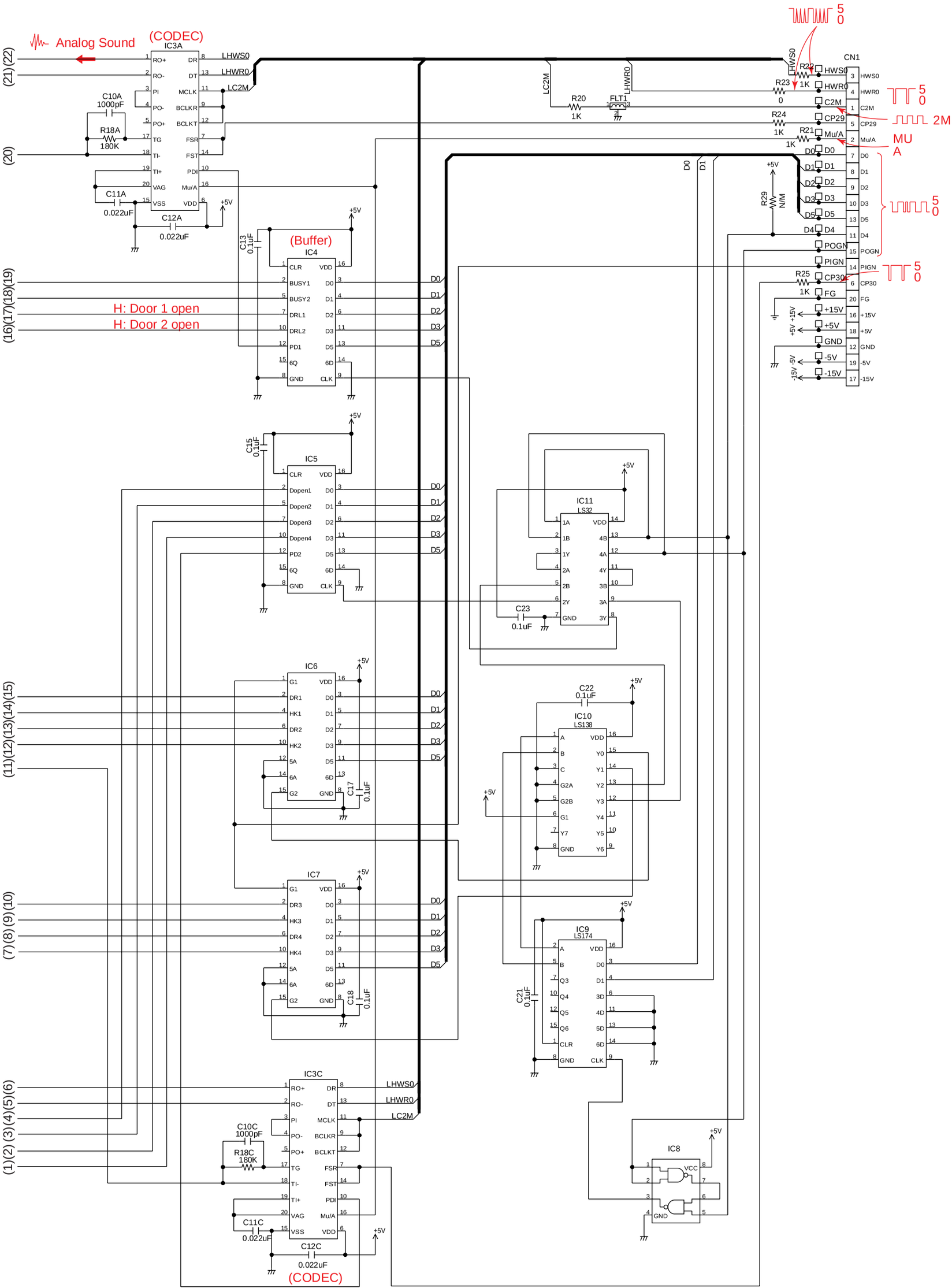
R107A
R165H
R165G
R165F
R165E
R165D
R165C
R165B
R165A
R108H
R108G
R108F
R108E
R108D
R108C
R108B
R108A
R113H
R113G
R113F
R113E
R113D
R113C
R113B
R113A
R114H
R114G
R114F
R114E
R114D
R114C
R114B
R114A
A1
A2
A3
A4
A5P
A5N
A6N
A10N
A9N
A3N
A4N
A1N
A2N
D0N
D1N
D2N
D3N
D4N
D5N
D6N
D7N
HWR1
CHS0
CHS1
CHS2
CHS3
12P
13P
D0
D1
D2
D3
D4
D5
D6
D7
OPEN

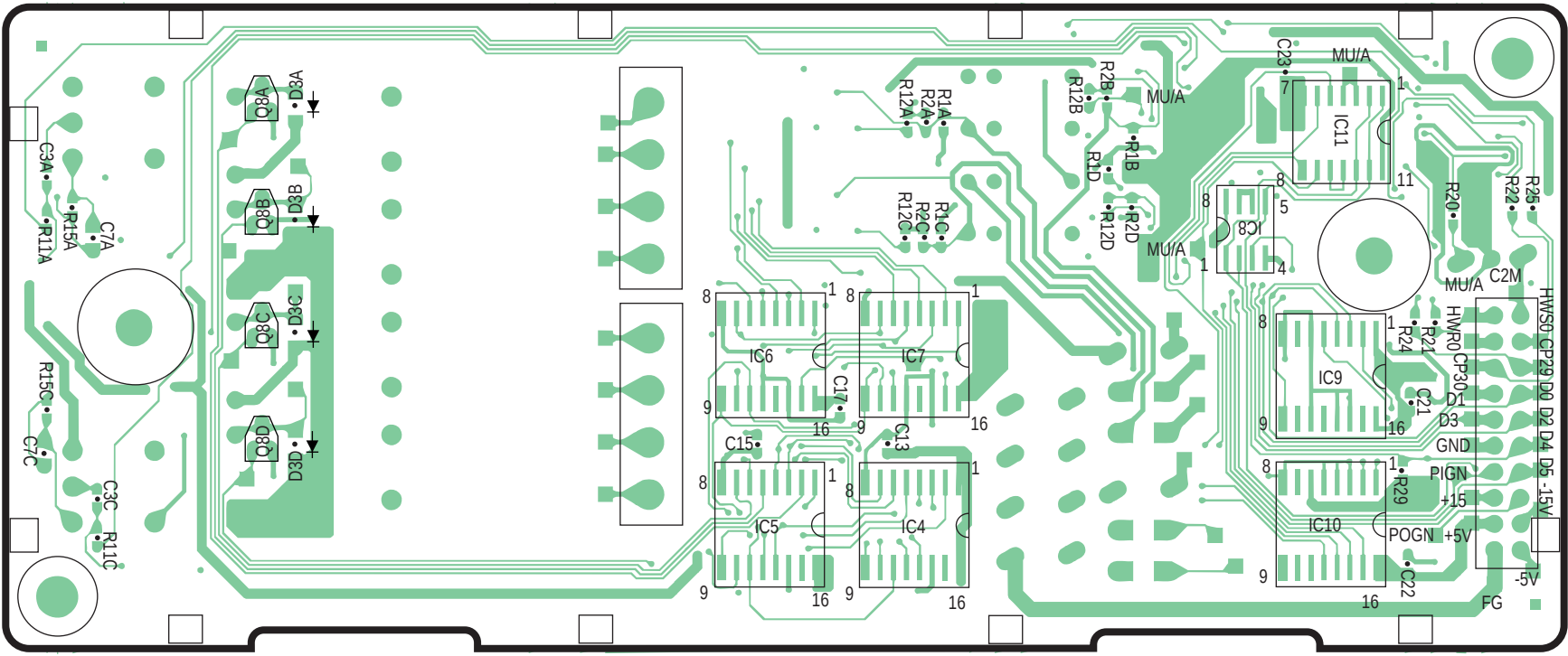

14
1
CN702
25
3
R703
R702
R701
R700
C700
C701
C702
C703
6
CN701
1
PQUP10135Z
PQUP10135Z
LED
1
2

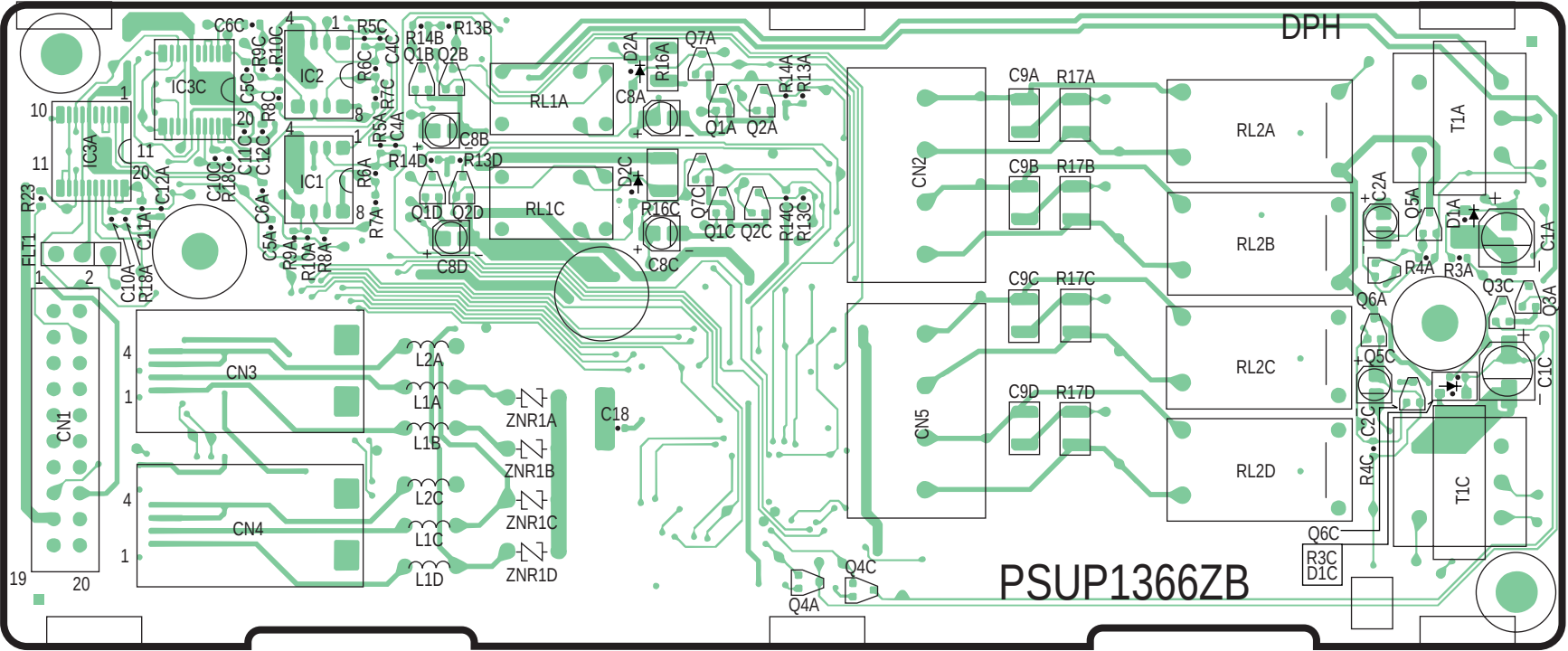

CN406
CN407
CN408
CN401
RA402
RA401
CN409
CN411
CN410
CN402
CN403
CN405
CN404
PQUP10068Z

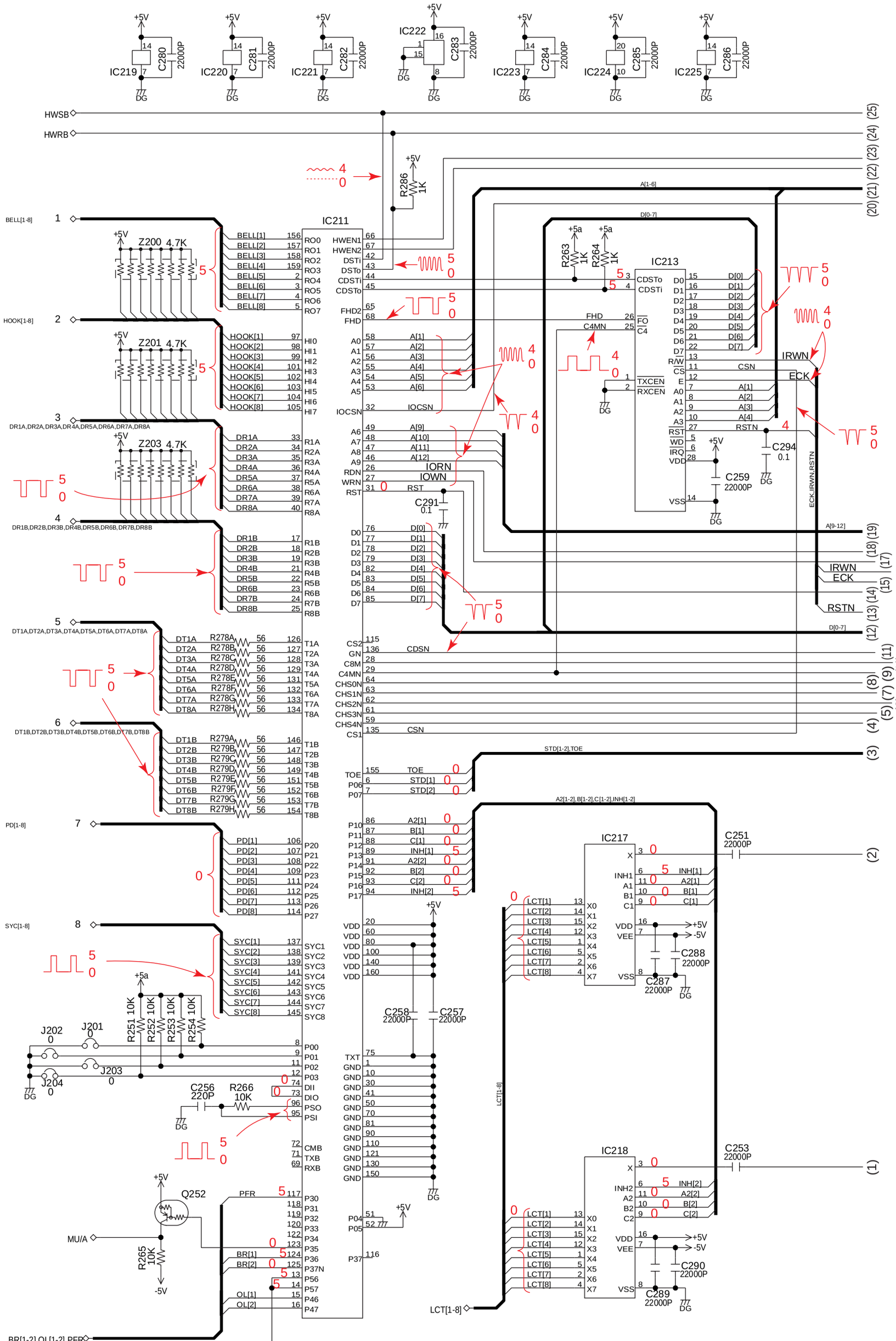

CN408
CN407
CN406
CN410
CN411
CN409
CN404
CN405
CN403
CN402
BELL
BELLS
GND
+5V
-15V
+15V

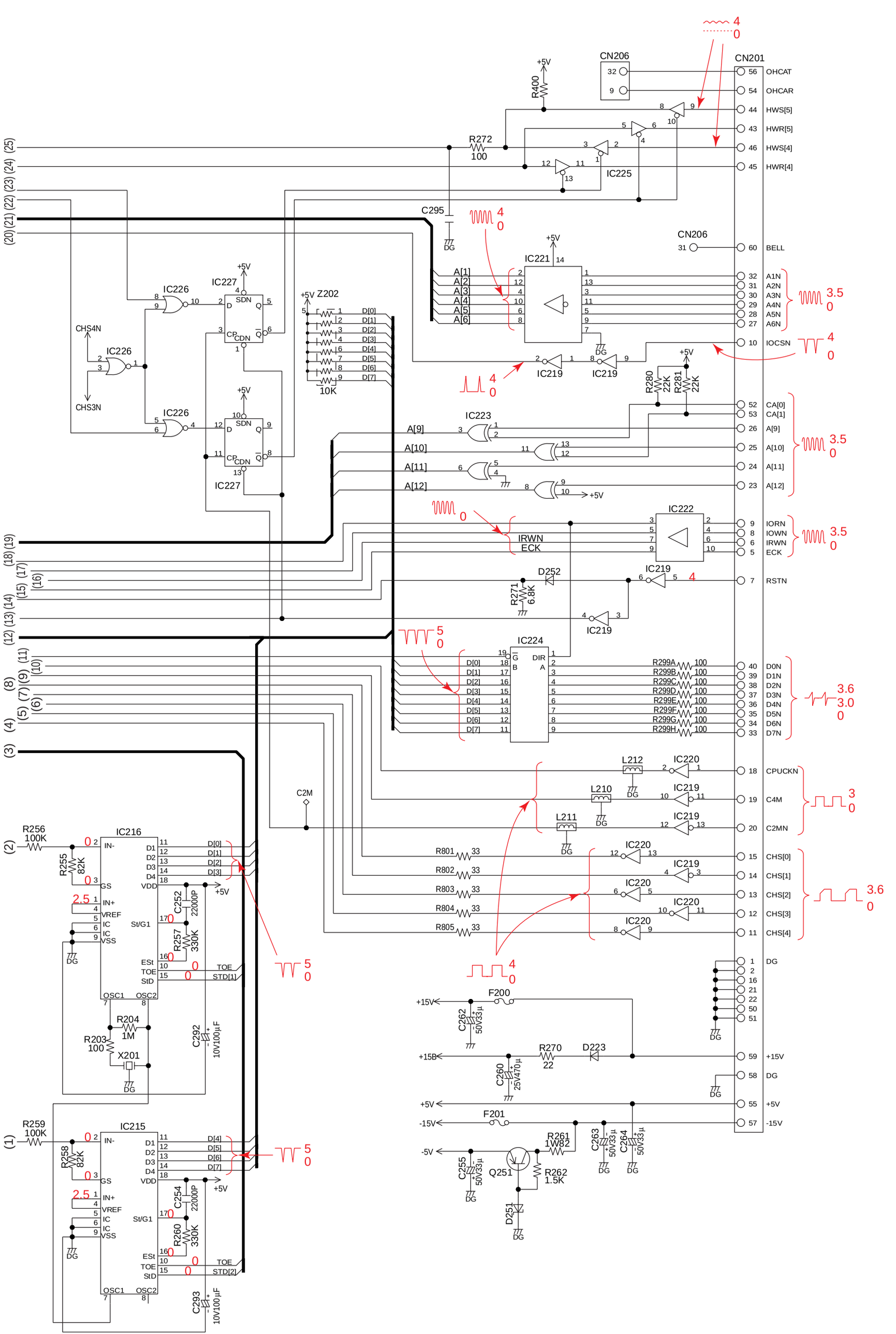

Door opener RLY
Doorphone 2
Doorphone 1
H: Calling from DPH
H: DPH connects
H: DPH connects with portable phone
Analog Sound
Door opener RLY
Door opener RLY
(1)(2)(3)(4)(5)(6)
(7)(8)(9)(10)
(11)(12)(13)(14)(15)
(16)(17)(18)(19)
(20)
(21)(22)


Analog Sound
(CODEC)
IC3A
LHWS0
LHWR0
LC2M
C10A
1000pF
R18A
180K
C11A
0.022uF
C12A
0.022uF
+5V
(Buffer)
IC4
C13
0.1uF
H: Door 1 open
H: Door 2 open
IC5
C15
0.1uF
IC6
C17
0.1uF
IC7
C18
0.1uF
IC3C
C10C
1000pF
R18C
180K
C11C
0.022uF
C12C
0.022uF
(CODEC)
IC11
LS32
C23
0.1uF
IC10
LS138
C22
0.1uF
IC9
LS174
C21
0.1uF
IC8
VCC
GND
CN1
HWS0
HWR0
C2M
CP29
Mu/A
D0
D1
D2
D3
D5
D4
POGN
PIGN
CP30
FG
+15V
+5V
GND
-5V
-15V
R20
1K
FLT1
R22
1K
R23
0
R24
1K
R21
1K
R29
N/M
R25
1K
2M
MU
A
(1)(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
(10)
(11)
(12)
(13)
(14)
(15)
(16)(17)(18)(19)
(20)
(21)(22)


C3A
R11A
C7A
R15A
R15C
C7C
C3C
R11C
D8A
D8B
D8C
D8D
R14A
R24A
R12A
R14C
R24C
R12C
R2B
R12B
R1B
R1D
R2D
R12D
MU/A
MU/A
MU/A
MU/A
C23
IC11
R20
R25
R22
C2M
HWR0
CP30
D1
D3
GND
PIGN
+15
POGN
+5V
-5V
FG
HWS0 CP29 D0 D2 D4 D5 -15V
R21
R24
C21
R29
C22
IC9
IC10
IC6
IC7
IC5
IC4
C17
C15
C13


DPH
PSUP1366ZB
IC3C
IC2
IC3A
IC1
CN1
CN2
CN3
CN4
CN5
RL1A
RL1C
RL2A
RL2B
RL2C
RL2D
T1A
T1C
L2A
L1A
L1B
L2C
L1C
L1D
ZNR1A
ZNR1B
ZNR1C
ZNR1D
C18
C8A
C8B
C8C
C8D
Q1A
Q2A
Q1C
Q2C
Q1D
Q2D
Q4A
Q4C
Q6A
Q6C
R3C
D1C


IC211
IC213
IC217
IC218
IC219
IC220
IC221
IC222
IC223
IC224
IC225
HWSB
HWRB
BELL[1-8]
HOOK[1-8]
PD[1-8]
SYC[1-8]
DR1A,DR2A,DR3A,DR4A,DR5A,DR6A,DR7A,DR8A
DR1B,DR2B,DR3B,DR4B,DR5B,DR6B,DR7B,DR8B
DT1A,DT2A,DT3A,DT4A,DT5A,DT6A,DT7A,DT8A
DT1B,DT2B,DT3B,DT4B,DT5B,DT6B,DT7B,DT8B
A[1-6]
A[9-12]
D[0-7]
IRWN
ECK
RSTN
IORN
IOWN
CDSN
CSN
IOCSN
FHD
RST
TOE
STD[1-2],TOE
A2[1-2],B[1-2],C[1-2],INH[1-2]
LCT[1-8]
BR[1-2],OL[1-2],PFR
MU/A
Z200 4.7K
Z201 4.7K
Z203 4.7K
Q252
J201
J202
J203
J204
C251 22000P
C253 22000P
C256 220P
C257 22000P
C258 22000P
C259 22000P
C287 22000P
C288 22000P
C289 22000P
C290 22000P
C291 0.1
C294 0.1
R263 1K
R264 1K
R265 10K
R266 10K
R286 1K
R251 10K
R252 10K
R253 10K
R254 10K


CN206
CN201
IC225
IC221
IC222
IC223
IC224
IC226
IC227
IC219
IC220
IC216
IC215
Z202
R400
R272
100
C295
R280
22K
R281
22K
R271
6.8K
D252
R299A
R299B
R299C
R299D
R299E
R299F
R299G
R299H
R801
R802
R803
R804
R805
L212
L210
L211
C2M
R256
100K
R255
82K
R257
330K
C252
22000P
R204
1M
R203
100
X201
C292
10V100µF
R259
100K
R258
82K
R260
330K
C254
22000P
C293
10V100µF
F200
F201
C262
50V33µ
C260
25V470µ
R270
22
D223
R261
1W82
R262
1.5K
Q251
D251
C255
50V33µ
C263
50V33µ
C264
50V33µ
CHS4N
CHS3N
IRWN
ECK
OHCAT
OHCAR
HWS[5]
HWR[5]
HWS[4]
HWR[4]
BELL
A1N
A2N
A3N
A4N
A5N
A6N
IOCSN
CA[0]
CA[1]
A[9]
A[10]
A[11]
A[12]
IORN
IOWN
IRWN
ECK
RSTN
D0N
D1N
D2N
D3N
D4N
D5N
D6N
D7N
CPUCKN
C4M
C2MN
CHS[0]
CHS[1]
CHS[2]
CHS[3]
CHS[4]
DG
+15V
+15B
+5V
-15V
-5V
TOE
STD[1]
STD[2]

TO CN204

CN206
FG 1
2
3
4
FG
7
-15V 33 → -15V
+15B 8 → +15B
+15V 10 → +15V
DG 11
12
HA 25
LA 26
RLYA 27
BGA 28
TA 29
RA 30

A

COMPARATOR

2 0 -2

5 0

0.7

IC203A

R201A 2.2K
R202A 2.2K
C223A
R276A 47
DR1A

R239A 2.2K
R240A 2.2K
C224A
R277A 47
DR1B

VREF

R248A 470

C202A 50V2.2
R200A 39

Q201A
R234A 2.2K
R235A 560
C217A 68P
DT1A

+5V
C219A 0.1
R237A 560
C218A 68P
R236A 2.2K
Q208A
DT1B

5 0

C216A 50V2.2
R238A 39

Q203A
R205A 22
R206A 68
+15V
Q300A
R207A 6.8K
C204A 10µ

Q204A
R208A 22
R209A 68
-15V
Q301A
R210A 6.8K
C222A 10µ

C205A 10µ

C212A 0.01
C213A 0.01

C206A 10µ
J256A 0
J257A
R222A 300

R220A 110K

C220A 0.039µF
R275A 56K
R224A 15K
R225A 33K
Q205A
Q206A
R226A 10K
D211A
R228A 12K
R229A 33K
R227A 47K
D210A
C211A 50V4.7
R232A 2W1K
D212A
D213A
R231A 1K
R230A 10K

RING TRIP DETECT

HOOK DETECT

IC203A
+5V
3
8
11
6
-5V

DT1A,DT1B,DR1A,DR1B

CODEC
IC201A

J250A 0
J251A
R330A
R214A 82K
C299A 220P
R215A 110K
C208A 0

J254A 0
J255A 0
R213A 3K
J260A
J252A 0
J253A
R212A 2.4K
R211A 300
R219A 110K
C207A 0
R216A 100K
R217A 100K

C901A 56P
R901A
R900A 91K
C900A 56P
R221A 91K
R902A
C209A 2200P

RO+ 1
PI 3
PO- 4
PO+ 5
TG 17
TI- 18
TI+ 19
VAG 20
MU/A 16
DR 8
DT 13
PDI 10
FSR 7
FST 14
MCLK 11
BCLKR 9
BCLKT 12
VDD 6
VSS 15
C210A 2200P

HWSB
HWRB
PD[1]
SYC[1]
C2M
MU/A 5
LCT[1] 0
HOOK[1] 5
BELL[1] 0

4 0
4 0
5 0
4 0

B

IC203B
R201B 2.2K
R202B 2.2K
C223B
R276B 47
DR2A

R239B 2.2K
R240B 2.2K
C224B
R277B 47
DR2B

R248B 470

C202B 50V2.2
R200B 39

Q201B
R234B 2.2K
R235B 560
C217B 68P
DT2A

+5DT
C219B 0.1
R237B 560
C218B 68P
R236B 2.2K
Q208B
DT2B

C216B 50V2.2
R238B 39

Q203B
R205B 22
R206B 68
+15V
Q300B
R207B 6.8K
C204B 10µ

Q204B
R208B 22
R209B 68
-15V
Q301B
R210B 6.8K
C222B 10µ

C205B 10µ

C212B 0.01
C213B 0.01

C206B 10µ
J256B 0
J257B
R222B 300

R220B 110K

C220B 0.039µF
R275B 56K
R224B 15K
R225B 33K
Q205B
Q206B
R226B 10K
D211B
R228B 12K
R229B 33K
R227B 47K
D210B
C211B 4.7
R232B 2W1K
D212B
D213B
R231B 1K
R230B 10K

IC203B
+5V
3
8
11
6
-5V

DT2A,DT2B,DR2A,DR2B

IC201B

J250B 0
J251B
R330B
R214B 82K
C299B 220P
R215B 110K
C208B 0

J254B 0
J255B 0
R213B 3K
J260B
J252B 0
J253B
R212B 2.4K
R211B 300
R219B 110K
C207B 0
R216B 100K
R217B 100K

C901B 56P
R901B
R900B 91K
C900B 56P
R221B 91K
R902B
C209B 2200P

RO+ 1
PI 3
PO- 4
PO+ 5
TG 17
TI- 18
TI+ 19
VAG 20
MU/A 16
DR 8
DT 13
PDI 10
FSR 7
FST 14
MCLK 11
BCLKR 9
BCLKT 12
VDD 6
VSS 15
C210B 2200P

HWSB
HWRB
PD[2]
SYC[2]
C2M
MU/A
LCT[2]
HOOK[2]
BELL[2]

CN206
HB 19
LB 20
RLYB 21
BGB 22
TB 23
RB 24

C

SAME AS B

CN206
HC 13
LC 14
RLYC 15
BGC 16
TC 17
RC 18

DT3A,DT3B,DR3A,DR3B

HWSB
HWRB
PD[3]
C2M
SYC[3]
MU/A
LCT[3]
HOOK[3]
BELL[3]

D

SAME AS B

CN205
HD 6
LD 5
RLYD 4
BGD 3
TD 2
RD 1

DT4A,DT4B,DR4A,DR4B

HWSB
HWRB
PD[4]
C2M
SYC[4]
MU/A
LCT[4]
HOOK[4]
BELL[4]

BREAK CONTROL1

+15V
C221 25V100µ
0
Q215
R285 1.2K
Q214
5
BR[1]

OVERLOAD DETECT1

+5V
R247 22K
R245 15K
5
Q213
R244 4.7K
OL[1]

OVERLOAD DETECT2

+5V
R243 22K
D220
5
R242 6.8K
D221
OL[2]

CN206
OL[1] 34
OL[2] 5
TO CN204

BREAK CONTROL2

+5V
0
Q211
R246 1.5K
Q210
-15
C220 25V100µ
R241 47K
-15V
BR[2]

CN205
BR[1] 34
BR[2] 33
TO CN204

CN206
6
TO CN204
PER

(0T)(9)(8)(7)(6)(5)(4)(3)(2)(1)

E

F

SAME AS E

G

SAME AS E

H

SAME AS E

TO CN203

CN205

HE 30
LE 29
RLYE 28
BGE 27
TE 26
RE 25

CN205

HF 24
LF 23
RLYF 22
BGF 21
TF 20
RF 19

CN205

HG 18
LG 17
RLYG 16
BGG 15
TG 14
RG 13

CN205

HH 12
LH 11
RLYH 10
BGH 9
TH 8
RH 7

IC203E

R201E 2.2K
R202E 2.2K
C223E
R248E 470
R239E 2.2K
R240E 2.2K
C224E
R276E 47
R277E 47
VREF
DR5A
DR5B

C202E 50V2.2
R200E 39
Q201E
R234E 2.2K
R235E 560
C217E 68P
DT5A
+5DT
C219E 0.1
C216E 50V2.2
R238E 39
R237E 560
C218E 68P
R236E 2.2K
DT5B
Q208E

Q203E
R205E 22
R206E 68
+15V
Q300E
R207E 6.8K
C204E 10µ
Q204E
R208E 22
R209E 68
-15V
Q301E
R210E 6.8K
C222E 10µ
C205E 10µ
C212E 0.01
C213E 0.01
C206E 10µ

J250E 0
J251E
R330E
R214E 82K
C299E 220P
R215E 110K
C208E 0
IC201E
RO+
PI
PO-
PO+
J254E 0
J255E
R213E 3K
J260E
J252E 0
J253E
R211E 300
R212E 2.4K
R219E 110K
C207E 0
R216E 100K
R217E 100K
C901E 56P
R901E
R900E 91K
C900E 56P
R221E 91K
C209E 2200P
R902E
R220E 110K
J256E 0
J257E
R222E 300
C220E 0.039µF
R275E 56K
R224E 15K
R225E 33K
Q205E
Q206E
R226E 10K
D211E
R228E 12K
R229E 33K
D210E
R227E 47K
C211E 4.7
R232E 2W1K
D212E
D213E
R231E 1K
R230E 10K
+5V

DR
DT
PDI
FSR
FST
MCLK
BCLKR
BCLKT
TG
TI-
TI+
VAG
VDD
VSS
MU/A
C210E 22000P

HWSB
HWRB
PD[5]
SYC[5]
C2M
MU/A
LCT[5]
HOOK[5]
BELL[5]

DT5A,DT5B,DR5A,DR5B
DT6A,DT6B,DR6A,DR6B
DT7A,DT7B,DR7A,DR7B
DT8A,DT8B,DR8A,DR8B

HWSB
HWRB
PD[6]
C2M
SYC[6]
MU/A
LCT[6]
HOOK[6]
BELL[6]

HWSB
HWRB
PD[7]
C2M
SYC[7]
MU/A
LCT[7]
HOOK[7]
BELL[7]

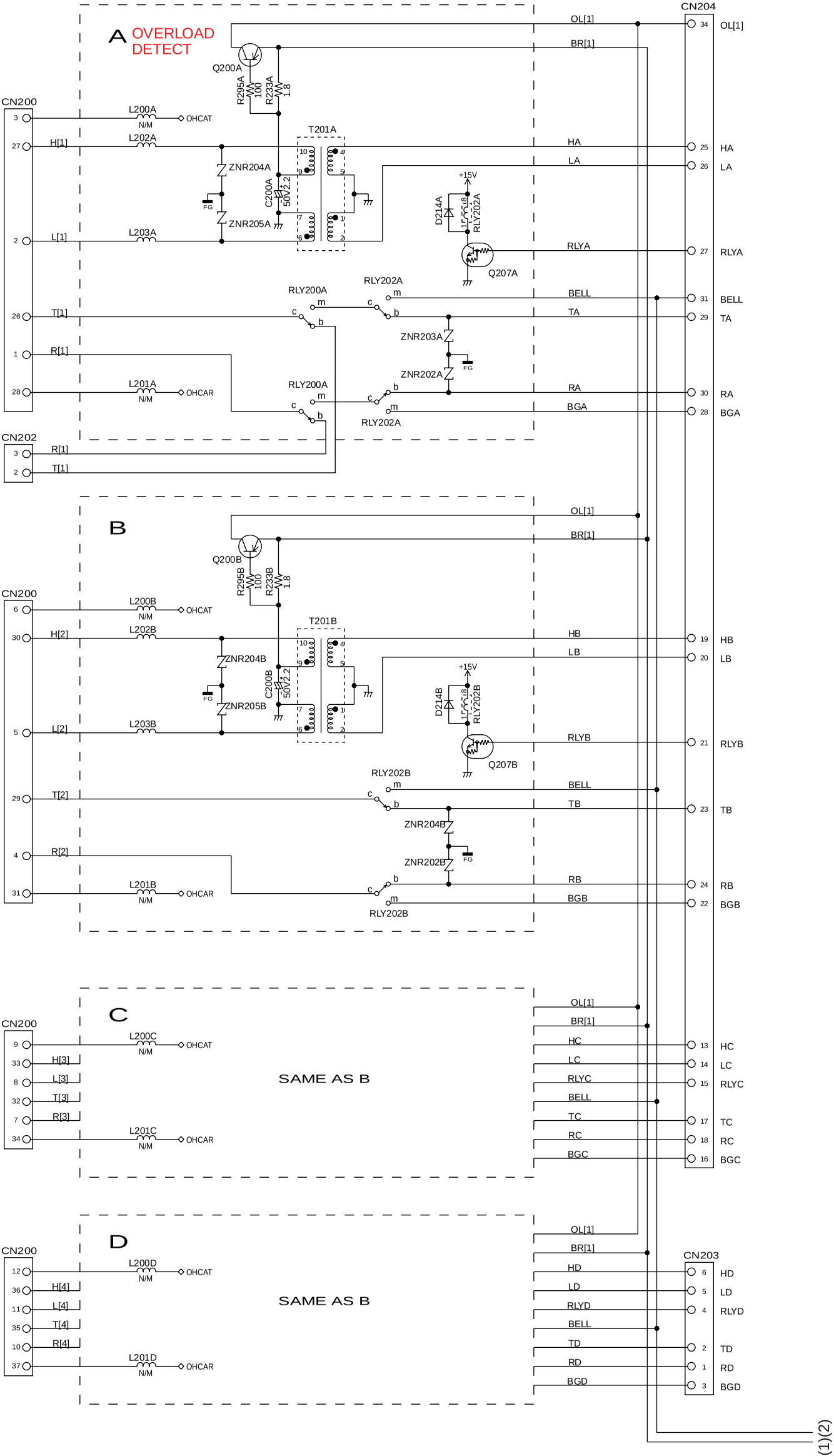
HWSB
HWRB
PD[8]
C2M
SYC[8]
MU/A
LCT[8]
HOOK[8]
BELL[8]

VREF
R293 6.8K
R294 1.2K
C265 22000P
+5V
C270 100µ

CN205
31
32

CN206
31 BELL

(1) C2M
(2) MU/A
(3) 3,4,5,6
(4) HWRB,HWSB
(5) 7 PD[1-8]
(6) 8 SYC[1-8]
(7) 10 LCT[1-8]
(8) 2 HOOK[1-8]
(9) 1 BELL[1-8]
(10) 9 BR[1-2],OL[1-2],PFR


A OVERLOAD DETECT
B
C
D
SAME AS B
SAME AS B
CN200
CN202
CN204
CN203
Q200A
Q200B
R295A 100
R233A 1.8
R295B 100
R233B 1.8
T201A
T201B
C200A 50V2.2
C200B 50V2.2
ZNR204A
ZNR205A
ZNR204B
ZNR205B
ZNR203A
ZNR202A
ZNR202B
D214A
D214B
RLY202A
RLY202B
Q207A
Q207B
+15V
FG
L200A N/M
L202A
L203A
L201A N/M
L200B N/M
L202B
L203B
L201B N/M
L200C N/M
L201C N/M
L200D N/M
L201D N/M
OHCAT
OHCAR
RLY200A
RLY202A
OL[1]
BR[1]
H[1]
L[1]
T[1]
R[1]
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L[2]
T[2]
R[2]
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L[3]
T[3]
R[3]
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HA
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RLYA
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TA
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BGA
HB
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RLYB
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TD
RD
BGD
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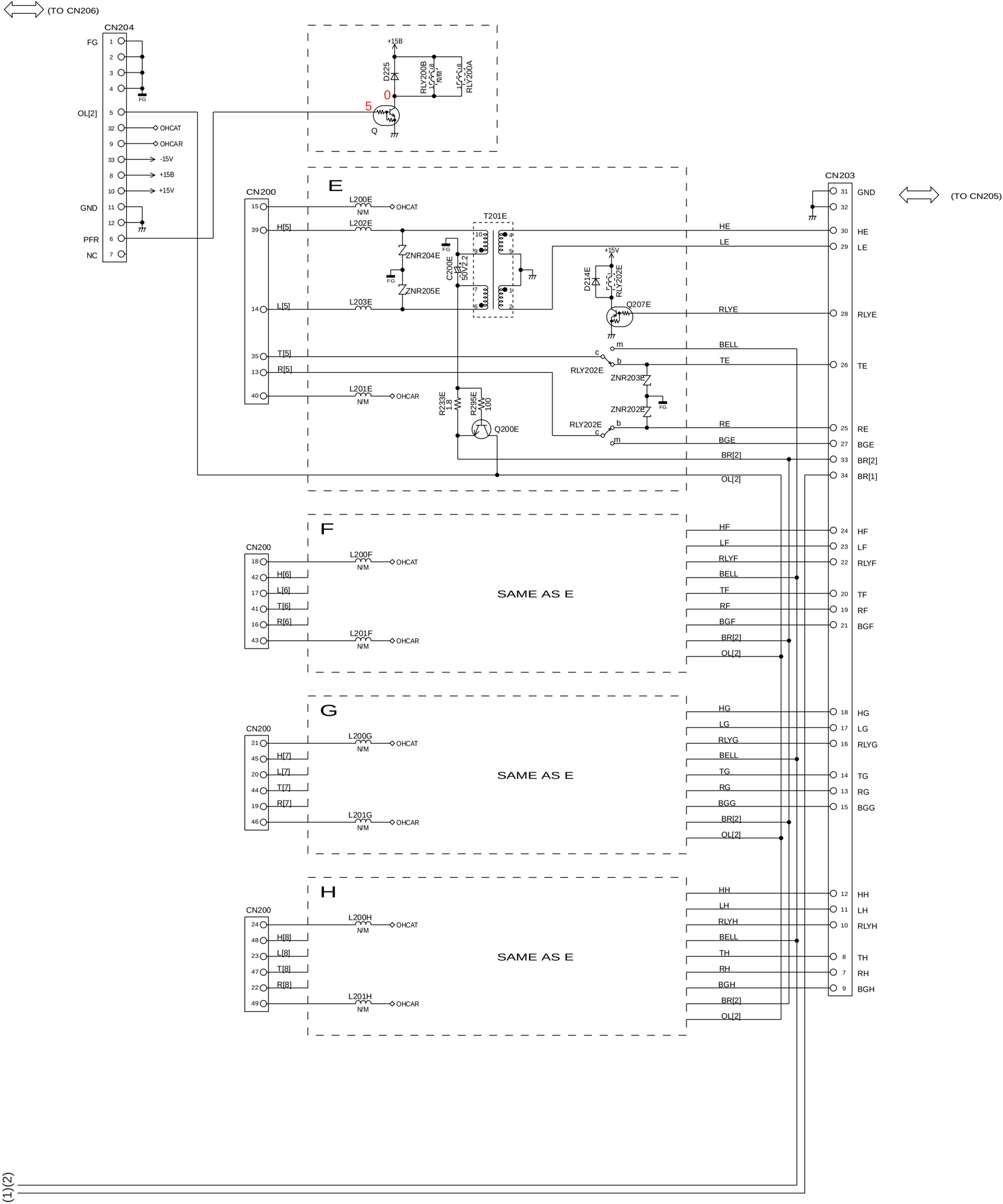
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NC
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OHCAR
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+15B
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Q
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CN200
L200E
N/M
H[5]
L202E
L[5]
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R[5]
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C200E
50V2.2
T201E
D214E
RLY202E
Q207E
RLY202E
ZNR203E
ZNR202E
R233E
R295E
Q200E
CN203
(TO CN205)
GND
HE
LE
RLYE
BELL
TE
RE
BGE
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OL[2]
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TG
RG
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H
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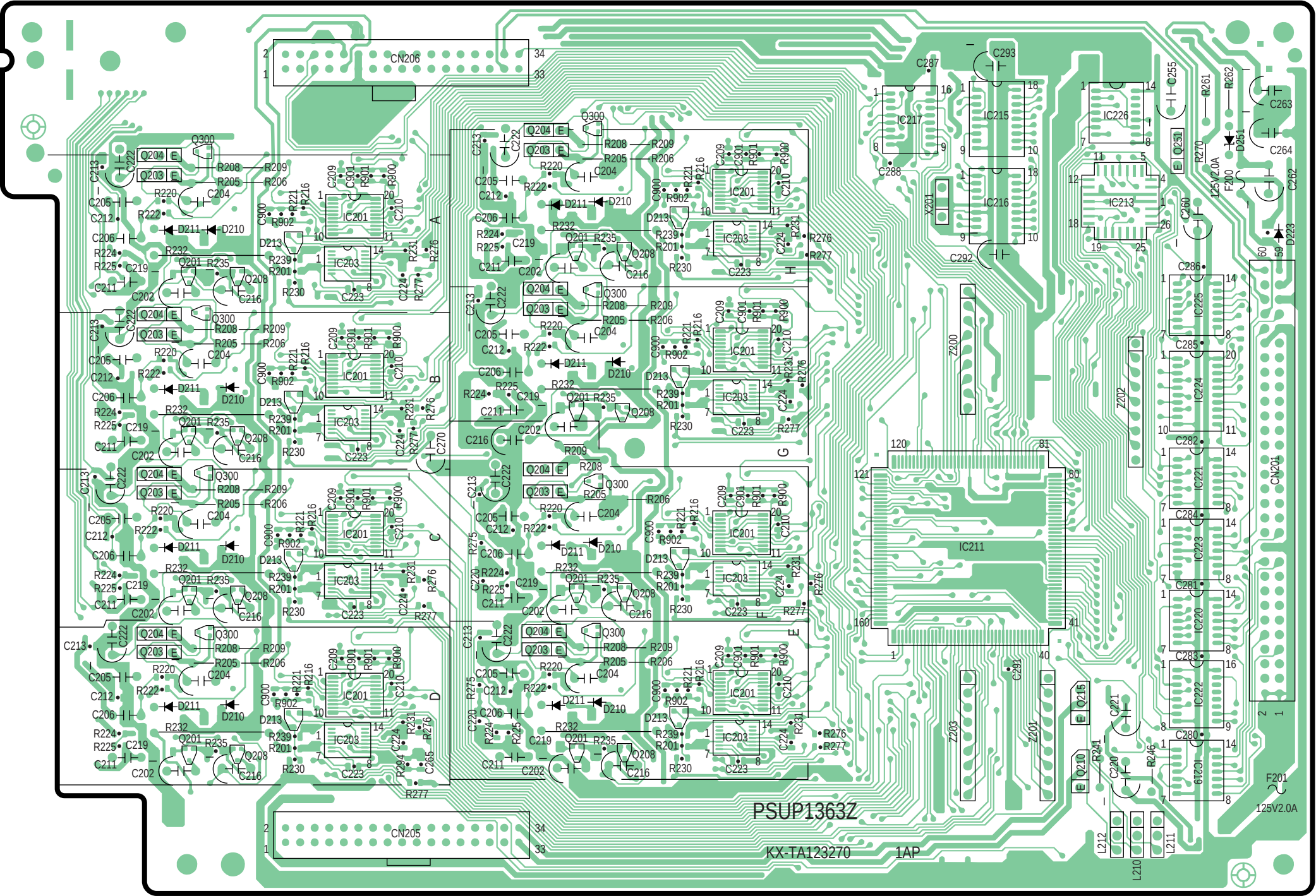
PSUP1363Z
KX-TA123270
1AP
CN205
CN206
CN201
IC201
IC203
IC211
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F201
125V2.0A